

LOOKING THROUGH THE FOG: UNITED STATES NATIONAL SECURITY
STRATEGY, NATIONAL MILITARY STRATEGY, AIR FORCE DOCTRINE AND
THE IMPACTS TO ISR (1990 – 2012)

BY
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ABSTRACT

The United States Air Force lacks a solid, holistic approach to managing or planning for the application of intelligence, reconnaissance, and surveillance (ISR) platforms, systems, or infrastructure. Hence, the DOD, which resides at the top of the military strategy creation chain, must be able to produce a coordinated plan for ISR, or any other mission set, that adequately meets the intent of the nation's grand strategic security guidelines. This procedure for providing guidance allows the various agencies to organize, train, and equip their respective organization to provide the commensurate capability required in order to guarantee national security. However, recent external reviews have provided a report card of the success of this process and the overall effects on ISR capabilities.

This thesis will focus on three distinct time-periods and answer three baseline questions in order to provide an examination of the utilization of ISR in US strategy from 1990 to 2012. This examination will identify: 1) The key elements that explained the nature of individual National Security Strategies (NSS), 2) The key elements as described in the National Military Strategy (NMS), and 3) How the US Air Force provide capabilities meeting the nation's requirements for ISR. These help explain the reported shortfall in ISR as captured in the GAO reports and COCOM urgent operational requests, and assist the DOD and Air Force in better forecasting the need for reformation within the service. The three distinct time-periods are 1990-1999, 2000-2009, and 2010-2012. Each period highlight a distinctive environment event that precipitated strategic change, but, more importantly, each will also feature details on the United States Air Force's presentation of mission design series (MDS) platforms to support the NSS and NMS.

The intent is to illustrate and explain the tenuous relationship between the grand strategic ideas espoused in National Security Strategy, translated in National Military Strategy, and enacted upon and presented for utilization by the Air Force.

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INTRODUCTION

In 1783, the first balloon flight took place allowing humans the opportunity to depart the grasp of earth and enter into the new air domain. In January of 1897, balloonist and designer David Schwarz was fatally overcome with emotion when Germany eventually agreed to his near 20-year quest for any government to see the merits of his rigid dirigible concept. On December 17, 1903 two brothers, Orville and Wilbur Wright went for a 12-second powered flight in North Carolina. Lee Kennett, in his book *The First Air War 1914-1918*, states, “One can date the formal beginnings of military aviation from February 10, 1908, when the U.S. Army Signal Corps ordered a Wright airplane and arranged for the Wrights to give flight instruction to two officers.”¹ In November 1908, Count Ferdinand Graf von Zeppelin, purchased the plans and notes fashioned by the late-Schwarz, built and tested the new machine, and introduced the first operationally acceptable Zeppelin into the German inventory.² The fight for battlefield information from the air had now begun. Through history, commanders have attempted to gain the advantage by observing the movement and maneuver of the enemy in order to gather indications and warnings through reconnaissance and surveillance. The air domain provided a global medium from which to monitor both land and sea.

In World War II, the strategy of the Royal Air Force (RAF) and United States Air Corps in the war against Germany merged into the combined bomber offensive. This offensive heavily relied on early forms of intelligence preparation of the battlefield in order to target the industrial base, as well as the networked infrastructure. However,

¹ Lee Kennett, *The First Air War: 1914-1918* (New York, NY: Free Press, 1991). pp. 7.

² Kennett, *The First Air War: 1914-1918*: pp. 4.

limited capabilities and a failure to plan for fully capable intelligence gathering aircraft minimized the overall effort and provided less than optimal information for planners.³

Sir John C. Slessor helped create part of the RAF's combined allied strategy and understood the need for information as a function of both air and land dominance. He believed that, "the object of air superiority is the control of air communications firstly for our own use and secondly to deny their use to the enemy."⁴ Although true air superiority is outside the nature of traditional intelligence gathering platforms, the scarcity of platforms able to accomplish the mission demands that air planners and strategists make full use of the capabilities available to them. Thus, if Slessor's observations are correct, then the sufficient allocation of ISR is needed in order to properly allocate forces towards the object of air superiority. Hence, air attack on lines of communication or in interdicting an enemy's ability to counter our air superiority platforms requires the proper use of all available intelligence assets in the force structure.⁵ However, the ability to leverage the accomplishments of David Schwarz, Count Zeppelin, and the Wright brothers and the utilization of air assets for intelligence, surveillance, and reconnaissance must be part of the holistic and cohesive approach to a nation's defense. Leading up to World War II, complications with reconnaissance, target acquisition, and battlefield intelligence had received insufficient consideration and led to deficiencies in preparedness prior to the kinetic portion of the war.⁶

In October 1945, the Joint Strategic Survey Committee concluded that in order to protect the United States from atomic attack, a capable and effective system of

³ Tami Davis Biddle, *Rhetoric and Reality in Air Warfare* (Princeton, NJ: Princeton University Press, 2002). pp. 162.

⁴ John C. Slessor, *Air Power and Armies* (Tuscaloosa, AL: The University of Alabama Press, 2009). pp. 4.

⁵ Slessor, *Air Power and Armies*: pp. 122.

⁶ Biddle, *Rhetoric and Reality in Air Warfare*: pp. 123.

intelligence gathering platforms must be ready to provide ample warning, which would enable a measure of defense.⁷ General Curtis LeMay understood the global nature of the nuclear threat and high-risk game of the Cold War. The first foundational policy that guided the modern creation of Strategic Air Command was that national leaders must take deliberate steps in “providing and overriding priority for the establishment of an intelligence system which will tell us the where and when of an enemy’s atomic force.”⁸ During LeMay’s tenure as commander of Strategic Air Command, a new reconnaissance platform was created that proved critical during 13 threatening days of the Cuban Missile Crisis. This platform continues to prove indispensable for the US military after nearly 60 continuous years of operation. This platform was Kelly Johnson’s famous U-2.

The Lockheed U-2, created to meet the Cold War dilemma faced by LeMay, remains a staple in the ISR inventory of the United States Air Force. The U-2, despite the loss of Major Rudy Anderson during the Cuban Missile Crisis, has proven capable against the most advanced anti-access capabilities around the world. In Desert Storm, U-2’s provided 50% of all imagery available, and 90% of the targeting information to the ground forces.⁹ In Kosovo, Maj Gen William T. Hobbins wrote, “we never dropped a bomb on a target without having a U-2 take a look at it.”¹⁰ In addition, most recently, the U-2 provided standoff capability during Operation Odyssey Dawn and Unified Protector,

⁷ Jeffrey G. Barlow, *Revolt of the Admirals* (Washington, DC: Government Reprints Press, 2001). pp. 65.

⁸ L. Douglas Keeney, *15 Minutes: General Curtis LeMay and the Countdown to Nuclear Annihilation* (New York, NY: St. Martin’s Press, 2011). pp. 67. His beliefs are captured in the writings and interviews conducted by Kenney

⁹ Richard A. Best and Christopher C. Bolkcom, "Congressional Research Report-Airborne Intelligence, Surveillance & Reconnaissance (ISR): The U-2 Aircraft and Global Hawk UAV Programs," in *REPORT CODE-RL30727* (Washington DC: Congressional Research Service, the Library of Congress, 2000), pp. CRS-2.

¹⁰ Best and Bolkcom, "Congressional Research Report-Airborne Intelligence, Surveillance & Reconnaissance (ISR): The U-2 Aircraft and Global Hawk UAV Programs," pp. CRS-7 as quoted in Peter Grier, “U-2 a ‘Mainstay’ of Allied Force,” Air Force, December 1999, p.14.

proving the continued utility of an air-breathing platform with systems that can provide both strategic awareness and operational targeting to commanders in a near-real-time manner.¹¹ The U-2 has the capability to carry electro-optical (EO)/ infrared (IR) camera, or a synthetic aperture radar (SAR) system, depending on the mission set or intelligence priorities. It also has the ability to carry a signals intelligence (SIGINT) system concurrently with any imagery intelligence (IMINT) system. Another key platform working in concert with the U-2 is the RQ-4 Global Hawk. The Global Hawk is a high altitude unmanned platform capable of providing long-duration, persistent ISR missions to commanders and national leaders. It has the capability to carry EO, IR, and SAR systems concurrently, which is an improvement over the U-2 in terms of immediate capability.¹² However, this system does present Air Force leaders and COCOM commanders with a significant choice. On one hand, the RQ-4 provides superior duration and range compared to the U-2, based on the unmanned design. It offers a low risk option in maintaining a watchful eye over hostile areas and the means to acquire EO, IR, or SAR on the same mission. On the other hand, the system space reserved to replace the pilot sacrifices sensor capability, which negates the aircraft's ability against many anti-access locations.

The first two ISR platforms discussed are mainly designed to work at the strategic and operational levels of war. There are inherent capabilities in both of these platforms that provide much needed capability at the tactical level; however, the limitations of high altitude ISR and the dynamic nature of a tactical ground engagement require a distinctive system. In Vietnam, dedicated RF-4s, OV-10s, and other tactical reconnaissance

¹¹ The author served as Director of Operations for a U-2 squadron directly supporting this conflict

¹² The U-2 can provide both EO/IR and SAR however is limited in that it can only do one or the other. 'Noses' must be swapped with either the SYERS (EO/IR) or ASARS (SAR) during ground ops.

platforms provided military planners a different approach to battlefield intelligence. Much like the days of observers aboard balloons hanging directly over the fight, these aircraft provided a close-in method of ISR, specifically trained to support the troops on the ground. The pilots who operated these mission-specific aircraft routinely worked at the forward edge of the battlefield with ground liaisons and developed synergistic relationships built on a mutually shared awareness of the realities and threats inherent to the ground domain. These tactical platforms carried forward into the Gulf War, then were rapidly terminated in favor of maintaining a strategic inventory of ISR systems (U-2) and relying on other platforms to provide non-traditional ISR (NTISR) in the more tactical arena.

That changed with the rapid introduction of the MC-12 platform. The MC-12 is a military version of the Beechcraft Super King Air 350 and 350-ER, equipped with EO/IR, Full-motion Video (FMV), and other mission specific capabilities. As Colonel Doug Lee explains, “there is something to be said when you have ‘skin’ in the game. The relationships we built between the squadron and the warfighter led to an open and profitable dialogue to the fight in Afghanistan.”¹³ He continued with, “you build trust and foster the human relationship between the troops on the ground and our Airmen supporting them.”¹⁴ In November 2008, the USAF authorized the first orders for commercial to military conversions of the *King Air*. In June 2009, then Lt Col Phil Stewart flew the first mission in Operation Iraqi Freedom and opened the doors back to

¹³ Colonel Douglas J. Lee, *Interview with Lt Col Alex Castro*, Personal Interview (Beale AFB, CA January 23, 2013). Col Lee was the first MC-12 squadron commander in Afghanistan and is currently the 9RW/CV

¹⁴ Lee, *Interview with Lt Col Alex Castro*.

the direct connection between tactical manned ISR and the ground domain.¹⁵ Colonel Stewart stated, “The MC-12 filled a void identified in a Joint Urgent Operational Need (JUON) filed by CENTCOM and ultimately gave the U.S. Marine Corps and Special Operations Forces a much needed functional support.”¹⁶ However, the move to reintroduce a dedicated and credentialed tactical ISR platform back into the inventory was not an easy one, nor of the forethought of airminded strategists. The move took external pressure, bypassed normal lines of acquisition, and was personally managed by the SECDEF via the creation of an ISR Task Force.

The U-2 and Global Hawk currently provide the unique capabilities inherent in high altitude ISR (HAISR) flight, while the MC-12 covers the immediate and focused ISR requirements of the ground components. Each platform can and does perform tasks and missions across the spectrum of airborne ISR requirements, but are functionally designed to accomplish their intended target sets. With the intervention of SECDEF and the 7 year gap between the other services needs for ISR and the USAF’s answer through Project Liberty, did the USAF have a vision or plan to support decision makers with ISR that met the needs of national security priorities? These plans are all part of the relationship between grand strategy, military strategic, and a holistic approach to the acquisition of ISR capabilities.

The U-2, Global Hawk, and MC-12 each currently perform missions and duties that give the combatant commander a range of options in dealing with ISR requirements across the levels of war in thier COCOM. However, the MC-12 program was a forced

¹⁵ Colonel Phillip A. Stewart, *Interview with Lt Col Alex Castro*, Personal Interview (Beale AFB, CA January 25, 2013). Now Colonel Stewart is the 9RW/CC and was the first MC-12 SQ/CC. Additionally, Project Liberty was the official programmatic name given to the acquisition and fielding of the MC-12.

¹⁶ Stewart, *Interview with Lt Col Alex Castro*.

solution outside of the Air Force's planned solutions for ISR, while the U-2 and Global Hawk continue to suffer from an 'either or' scenario because of a disjointed argument for why the service needs a range of options. Are the guidelines in National Security Strategy unclear? Is there a disconnect in the translation of the NSS in the National Military Strategy? Or, does the Air Force simply still not value supporting airpower's role in the ISR requirements of the Joint environment? Ultimately, the examination of grand strategy (NSS), clarified in military direction (NMS), will determine if the strategic guidance, doctrine, and Air Force acquisition of ISR is providing the requisite capability required for national security.

Chapter 1

Framing the Problem, Identifying the Organizations, and Definitions

If the relationship between grand strategy and military strategy is relatively self-evident, the same cannot be said about the relationship between strategy and the character of the military capabilities on which it relies . . . which suggests that developing and fielding military capabilities without, at the very least, considering their grand strategic implications probably is unwise.

Richard Hart Sinnreich

The key to achieving and maintaining lasting superiority that cannot easily be duplicated by others lies in the integration of information, air, and space.

*Lt Gen Jay W. Kelley
Air Force for 2025*

The United States Air Force lacks a solid, holistic approach to managing or planning for the application of intelligence, reconnaissance, and surveillance (ISR) platforms, systems, or infrastructure. In March 2008, a United States Government Accounting Office (GAO) report from the Subcommittee on Air and Land Forces stated, “DOD does not have a clearly defined vision of a future ISR enterprise to guide its ISR investments.”¹ This problem becomes increasingly difficult given the inability to define the actual need that must be filled by either the Air Force or other providers of capability. In April 2012, a performance audit of DOD ISR by the House Permanent Select Committee on Intelligence documented the “DOD’s ineffectiveness at defining and prioritizing its ISR requirements in light of insatiable demand for ISR.”²

¹ Government Accountability Office GAO, Intelligence, Surveillance, and Reconnaissance: DOD Can Better Assess and Integrate ISR Capabilities and Oversee Development of Future ISR Requirements, GAO-08-374, (Washington D.C. March 2008), <http://www.gao.gov/new.items/d08374.pdf>. pp. opening statement.

² House Permanent Select Committee on Intelligence HPSCI, “Performance Audit of Department of Defense Intelligence, Surveillance, and Reconnaissance,” United States Government,

Framing the Problem

B.H. Liddell Hart describes military strategy as that which, “forms the plan of war, maps out the proposed course of the different campaigns which compose the war, and regulates the battles to be fought in each.”³ Hart continues as he explains the government’s fundamental requirement to create a clearly defined “higher strategy that co-ordinates and directs all the resources of a nation, or band of nations, towards the attainment of the political object(s) defined by the fundamental policy [of that nation].”⁴ Hence, the DOD, which resides at the top of the military strategy creation chain, must be able to produce a coordinated plan for ISR, or any other mission set, that adequately meets the intent of the nation’s grand strategic security guidelines. This procedure for providing guidance allows the various agencies to organize, train, and equip their respective organization to provide the commensurate capability required in order to guarantee national security. However, recent external reviews have provided a report card of the success of this process and the overall effects on ISR capabilities.

Several key trends began to develop that detailed numerous aspects of the apparent shortfall of ISR as well as the independent contributing difficulties. The GAO reports previously cited are focused on long term funding for continued innovation of new technologies, some were of the lack of leadership in the ISR chain that contributed to stagnation, and others noted countless failed attempts to rectify any gaps. However, there is a shortage of reviews that systematically dissect the issue into an evaluation of historical strategic guidance and the USAF’s ability to adequately project and answer the

<http://intelligence.house.gov/sites/intelligence.house.gov/files/documents/ISRPerformanceAudit%20Final.pdf> (accessed on 15 December 2012).

³ B.H. Liddell-Hart, *Strategy-2nd Revised Edition* (New York, NY: Penguin Publishing, 1991). pp. 319.

⁴ Liddell-Hart, *Strategy-2nd Revised Edition*: pp. 322.

requirements of national leaders. In other words, who is accountable for the shortfalls in providing both the right capabilities, or force structure without committing needless fiscal resources supplemented by poor strategic vision. This thesis is an attempt to bring the individual constituents into a single document and assist in resolving the need for a strategic look at ISR.

In April 2010, then- Major Valarie Long, produced a short review titled *Operational Design and ISR and Zombies*, as part of a graduation requirement in Air Command and Staff College. In her review, she stated that ISR suffered from “disaggregation that caused a lack of coherence of focus of the overall ISR strategy because the challenges of managing a desperate conglomeration of assets and processes were overwhelming.”⁵ Her research extracted the variances in planning and compared them to the Joint Operational Planning Process (JOPP) as a means to tie requirements, demand, assessments, and allocation towards codified decisive points. This application of the JOPP would allow planners and senior leaders some form of approach that could potentially normalize the large shifts experienced in the global integration and application of ISR capabilities, systems, and associated PED. Her theory is valid given the analogies of a planned roadmap, key decisive points that serve as metrics, and an agreed upon end state. All of which would give ISR an end-to-end method of management and evaluation across the DOD. Although there are currently processes in place in terms of acquisition, various different and disaggregated organizations pursue individual charters with no one single organization holding the reigns for overall process management.

In late 2011, Colonel Dagvin Anderson explored the view of senior leaders in

⁵ Maj Valarie Long, "Operational Design and ISR and Zombies" (ACSC Graduation Research Project Academic Year '10, Air University Maxwell AFB, AL, April 2010), pp. v.

terms of ISR and the lack of progress toward a cohesive application of intelligence as part of existing strategic plans.

One of the most common questions heard at senior levels in the military is ‘Why is ISR still a high-demand, low-density capability after several years of needing it?’ We have done much to boost the number and quality of assets in combat, such as flying more sorties on the battlefield and standing up the ISR Task Force within the DOD to expedite the fielding of ISR platforms and sensors. Since 2009 the number of ISR sorties in Afghanistan alone has quadrupled, and in just the last year the Air Force has fielded wide-area surveillance systems such as Gorgon Stare . . . Despite this effort, the Air Force still cannot meet the demand.⁶

Here, Colonel Anderson’s thoughts elucidate the shortage of providing a way of meeting the demand for ISR despite the USAF’s continued ownership of assets such as the U-2, Global Hawk, and MC-12. Hence, despite the warnings of the GAO, the ISR flight plan which is a form of the JAOP-type process articulated by Lt Col Long, the Air Force continues to miss the mark on proactive acquisition and successful fielding of the right mix of ISR in support of national strategy.

The External Performance Reviews

In 2003, the Department of Defense initiated a call for ‘transformation’, which signaled a move away from outdated Cold War ideologies to a force more flexible and responsive to a wider range of military operations. “A key component of this transformation was DOD’s Intelligence, Surveillance, and Reconnaissance (ISR) capability,” which ultimately determined the success or failure of the DOD in regards to

⁶ Colonel Dagvin Anderson, "A Holistic Approach To Intelligence, Surveillance, and Reconnaissance ", *Air & Space Power*, no. 2 (Winter 2011), http://www.airpower.au.af.mil/airchronicles/apj/2011/2011-4/2011_4_04_anderson.pdf (accessed 7 Feb 2013). pp. 55.

providing relevant capabilities for a rapidly changing environment of conflict.⁷ The horrific events of September 11, 2001 illustrated a key weakness in the overall national security perimeter protected by an antiquated Cold War model of military defense and intelligence. The environment had changed; services singularly focused and organized to fight the large standing forces of the Soviet Union were simply unprepared to deal with a comparatively smaller threat. The DOD's own 2001 Quadrennial Defense Review (QDR) illustrated that the U.S. could not "predict with a high degree of confidence the identity of the countries or the actors that may threaten (our) interest and security."⁸ In order to achieve a higher degree of predictability in gathering information and monitoring the actions of potentially hostile actors, a fundamental shift in prioritization of mission areas would need to be undertaken. In the case of the United States Air Force, ISR needed transform in both doctrinal significance and strategic management, similar to the rest of the force.

Judy Chezek, a national defense fellow in foreign affairs, articulated the need for the ISR community to embrace the internal need for a cohesive approach to intelligence, and to minimize bureaucratic inefficiencies. Yet, the Air Force, as the largest military operator of ISR aircraft and intelligence gathering systems, took on the transformation challenge as a technology acquisition puzzle. The ISR transformation effort, in Air Force eyes, required both the creation of an integrated approach to taking multiple platforms and systems and an aggressive acquisition strategy that did not take into account the

⁷ Judy G. Chizek, "Military Transformation: Intelligence, Surveillance and Reconnaissance," in *Report for Congress-RL31425* (Washington DC: Foreign Affairs, Defense, and Trade Division-Library of Congress, January 2003), pp. CRS-1.

⁸ Chizek, "Military Transformation: Intelligence, Surveillance and Reconnaissance," pp. CRS-3.

larger national ISR force.⁹ The procurement of small remotely piloted aircraft (RPAs), attempting to move towards a space-based ISR system, ‘Smart Tankers’ that integrated a surveillance suite into a refueling aircraft, RQ-4 Global Hawk acquisition, new Theater Battle Management Core Systems (TBMCS), and various other new weapon systems all pressed for attempting to answer the riddle of intelligence via the expenditure of capital. Through her work, she concluded that the “operational changes the Air Force is now attempting to develop are more incremental than revolutionary” and “though the Air Force thinks it is doing a good job providing ISR, it is not able to provide a global perspective.”¹⁰ Yet, despite the attempt at wide range integration and procurement of assets, the Air Force failed to provide commanders the information or situational awareness they required to fight the nation’s wars.

In April 2007, a GAO report to the House Committee on Armed Services included information criticizing the progress made towards ISR and the failure to meet the “statutorily required ISR roadmap that catalogues current (and future) ISR capabilities.”¹¹ This report determined that the DOD roadmap had failed to: (1) identify future ISR requirements, (2) identify ISR funding priorities, and (3) establish a metric for measuring progress. The report further condemned the DOD in its inability to identify lacking or duplicative ISR capabilities, identify any future critical gaps, or define requirements for meeting “the goal of global persistent surveillance.”¹² The DOD had

⁹ Chizek, “Military Transformation: Intelligence, Surveillance and Reconnaissance,” pp. CRS-13.

¹⁰ Chizek, “Military Transformation: Intelligence, Surveillance and Reconnaissance,” pp. CRS-13.

¹¹ Government Accounting Office GAO, ISR - Preliminary Observations on DOD’s Approach to Managing Requirements for New Systems, Existing Assets, and Systems Development GAO-070596T, (Washington D.C. : GAO, April 2007), <http://www.gao.gov/assets/120/115795.pdf>. pp. 8.

¹² GAO, *ISR - Preliminary Observations on DOD’s Approach to Managing Requirements for New Systems, Existing Assets, and Systems Development GAO-070596T*. pp. 8-9.

failed to meet the number one “key operational capability of strengthening intelligence”¹³ and also fell short of Secretary of Defense Donald Rumsfeld’s goal in “building upon the efforts of the 2001 QDR to develop an adaptable, global approach that acknowledges the limits of our intelligence, anticipates surprises, and positions us to handle strategic uncertainty.”¹⁴ Additionally, the integration efforts of 2003 were proving fruitless in providing the battlefield commanders adequate situational awareness:

While the DOD has visibility into the major ISR programs supporting theater-level requirements, it currently does not have visibility into all ISR assets. Also, the commander responsible for ongoing joint air operations does not currently have visibility over how tactical assets are utilized, nor do tactical units have visibility into how theater-level and ISR assets are tasked. DOD lacks metrics and feedback to evaluate its ISR missions. Without better visibility and performance evaluation, DOD does not have all the information it needs to validate the demand for ISR, optimize the capabilities offered, reach a joint approach to ISR, or acquire new systems that best support the warfighting needs.¹⁵

Thus, even if the DOD possessed a well-articulated ISR roadmap, it would not adequately serve the combatant commanders based a lack of rigorous and factual data. The fact that despite nearly four years of increased demands for the concentration on a holistic plan for ISR, captured by the 2003 review completed by Judy Chezek, there was still a void in the successful creation of a comprehensive strategy for the gathering, procurement, or sustainment of intelligence capabilities.

In March of 2008, the United States Government Accounting Office (GAO) completed a report to the Subcommittee on Air and Land Forces, Committee on Armed Services, House of Representatives titled *DOD Can Better Assess and Integrate ISR*

¹³ (DOD) Department of Defense, National Defense Strategy of The United States of America - 2005, (Washington D.C.March 2005), http://history.defense.gov/resources/2005_NDS.pdf. pp. 12.

¹⁴ Department of Defense, *National Defense Strategy of The United States of America - 2005*. pp. iii.

¹⁵ GAO, *ISR - Preliminary Observations on DOD's Approach to Managing Requirements for New Systems, Existing Assets, and Systems Development* GAO-070596T. pp. 12-14.

Capabilities and Oversee Development of Future ISR Capabilities. This study is the product of a Congressional mandate for the GAO to: 1) describe the challenges that the DOD faced in integrating the ISR enterprise, 2) assess DOD's management approach to for improving integration of its future ISR investments, and 3) evaluate the extent to which DOD had implemented key activities to ensure ISR acquisitions filled unbiased requirements, were not duplicative, and used a joint approach to meeting the warfighter's needs.¹⁶ What the GAO found was an unfavorable report on the state of ISR and the dysfunctional environment that resided within the DOD.

This report speaks to the disaggregate approach to funding programs and capabilities, separate military and civilian requirement vetting processes, and the lack of an overall inter-agency approach to the intelligence gathering puzzle. However, the most condemning statement was the assertion that the DOD lacked a clear vision for ISR:

Past efforts to improve integration across DOD and national intelligence agencies have been hampered by the diverse missions and different institutional cultures of the many intelligence agencies that DOD supports. While they develop defense intelligence budgets, some DOD activities also receive funding through the national intelligence budget to provide support for national intelligence efforts. Disagreements about equitable funding from each budget have led to program delays. Separate military and intelligence requirements identification processes also complicate efforts to integrate future ISR investments. [Essentially], DOD does not have a clearly defined vision of a future ISR enterprise to guide its ISR investments (emphasis added).¹⁷

Without a clear vision of the desired ISR end state and sufficient detail on existing and planned systems, DOD decision makers lack a basis for determining where additional capabilities are required, prioritizing investments, or assessing progress in achieving

¹⁶ GAO, *Intelligence, Surveillance, and Reconnaissance: DOD Can Better Assess and Integrate ISR Capabilities and Oversee Development of Future ISR Requirements*, GAO-08-374, pp. opening statement.

¹⁷ GAO, *Intelligence, Surveillance, and Reconnaissance: DOD Can Better Assess and Integrate ISR Capabilities and Oversee Development of Future ISR Requirements*, GAO-08-374, pp. 6.

strategic goals, as well as identifying areas where further investment may not be warranted. Essentially the DOD, despite the creation of an ISR Roadmap, failed to provide “(1) a clear vision of a future integrated ISR enterprise that identifies what ISR capabilities are needed to achieve DOD’s strategic goals, or (2) a framework for evaluating tradeoffs between competing ISR capability needs and assessing how ISR capability investments contribute towards achieving those goals.”¹⁸

An article by Barry Rosenberg, which spoke about the shifting priorities and programs within the military services, serves as an example of the fractured approach to ISR acquisition and planning. He wrote, “With arguably more ISR assets than any other of the military services, the Air Force has been challenged by the lack of corporate governance process for ISR.”¹⁹ Secretary of Defense Robert Gates announced that an Air Force Flight Plan that would “advance the ISR corporate governance process, provide a holistic assessment of capabilities, requirements, risks and needs for the purpose of shifting [the Air Force] in a different strategic direction.”²⁰ The unfortunate message conveyed in the article is the Air Force’s lack of both preparation before the horrific acts of 9/11 and the extremely latent and reactive adjustments made to the capability portfolio since the beginning of Operations Iraqi Freedom and Enduring Freedom. This article, written in 2009, underlines the dysfunction found in the service which was also unprepared to meet the needs of the COCOM’s despite the eight years of change after 9/11. To this point, the SECDEF announced a recommendation for a \$2 billion budget

¹⁸ GAO, *Intelligence, Surveillance, and Reconnaissance: DOD Can Better Assess and Integrate ISR Capabilities and Oversee Development of Future ISR Requirements*, GAO-08-374. pp. 22.

¹⁹ Barry Rosenberg, “DOD Puts ISR In The Vanguard,” 1105 Media Inc.-Government Information Group, <http://defensesystems.com/Articles/2009/05/06/Cover-Story-C4ISR-priorities.aspx?p=1> (accessed on 1 March 2013). No page numbers are present on the article online and will remain absent from subsequent entries.

²⁰ Rosenberg, “DOD Puts ISR In The Vanguard”. This is as captured by the article by Barry Rosenberg.

increase, including a 62 percent increase in unmanned aircraft system (UAS) assignments that would equate to a 127 percent increase in what the Air Force had committed in 2008.²¹ This speaks to the lack of strategic application of thought towards the missions that the Air Force must perform and resides outside the well-manicured showground of air superiority. Thus, the service found itself lagging in an ability to commit the required level of airpower to the battlefield, in terms of ISR, as requested by the COCOM's. In spite of lacking an effective corporate governance process and addressing the impaired bureaucratic routine, the Air Force instead chose to proceed with a technical solution articulated by Col Tim Skinner, Chief of Air Force ISR Plans and Integration Division. He addressed the lack of ISR capability, internal flexibility, and a call by the COCOM's to provide the requisite amount and type of ISR:

The key tool the Air Force is developing to help it make those decisions is an interactive database called the ISR Capabilities and Requirements Tool, which is designed to contain all known strategies, tasks, shortfalls and solutions. We are looking to migrate it up to higher classification levels because some of the shortfalls, gaps and solutions will likely require more security. The database will enable all the major commands to access source documents, such as the Air Force's strategic plan, the national defense strategy and the ISR strategy released by Lt. Gen. David Deptula, the Air Force's deputy chief of staff for ISR. The database is in its first cut right now, as it contains old data, especially in the solutions piece. You cannot take it and translate it into actual requirements. It needs more detail.²²

The extremely unfortunate side note to this discussion is the overall timing of the change in focus. This plan, occurring eight years after the onset of OIF and OEF, would still need another eighteen months to be fully mission ready and would not influence acquisitions or ISR management until the 2014 DOD budget. This represents a timeline

²¹ Rosenberg, "DOD Puts ISR In The Vanguard".

²² Rosenberg, "DOD Puts ISR In The Vanguard".

that illustrates the delineated fashion of strategic forecasting, capability, and analysis surround the ISR arena especially in support of the counter-insurgency (COIN) fight dominating current U.S forces.

Despite a national and civ-mil campaign plan that requires a holistic approach to COIN, the DOD is failing to apply the required level of ISR towards the COCOMs non-traditional requirements, and has shown little interest in supporting interagency doctrine.²³ The difficulty may be in the vast portfolio owned by the Air Force in terms of types of platforms, or variations of major weapon systems. However, the production of relevant airpower should not depend on what the service seems dogmatically married to, but what the warfighter needs. Since the Cold War, efforts to upgrade the Air Force's ability to provide ISR capabilities in support of the air dominance mission have fallen victim to a preference for supporting the tactical air fleet.²⁴ This is not to say that the need for continued development in the air superiority domain is not imperative; however, the Air Force seems to favor accepting low-risk in the air dominance specialty and instead prefers to transfer that risk into the ISR, tanker, and air mobility fields. This has placed the Air Force at a disadvantage in providing a leading level of capability to the joint environment, in terms of ISR, and forced some services to take matters into their own hands. During Operation Iraqi Freedom, the 1st Marine Expeditionary Force found

²³ Defense Science Board (DSB), Counterinsurgency (COIN) Intelligence, Surveillance, and Reconnaissance (ISR) Operations, (Washington, DC: Office of the Undersecretary of Defense for Acquisition, Technology, and Logistics, February 2011), <http://journalistsresource.org/studies/government/congress/iraq-afghanistan-counterinsurgency-intelligence#> (accessed on 12 March 2013). pp. vi. In 2009, the U.S. Government produced the Counterinsurgency Guide where the DOD was a signatory and assumed responsibility for all COIN collection requirements. However, the US Air Force found itself unprepared to deliver airpower in this fashion as ISR was not an overall priority.

²⁴ Loren B. Thompson, U.S. Air Dominance in a Fiscally-Constrained Environment: Defining Paths to the Future-Intelligence, Surveillance, and Reconnaissance, (Arlington, VA: Lexington Institute, March 2013), <http://www.lexingtoninstitute.org/library/resources/documents/Defense/AirDominance-ISR.pdf> (accessed on 21 Mar 2013). pp.2.

themselves surrounded by three Iraqi divisions, and, when they did not warrant sufficient priority for tactical ISR coverage from the Air Force, they in-turn tasked one of their organic aviation units away from its primary mission to gain sufficient support.²⁵

Additionally, “due to the lack of support, or at least the perceived lack of, theater ISR, the Army has procured and deployed organic airborne ISR assets . . . and some have said that the Army is essentially recreating the Army Air Corps.”²⁶

The significance of the previous statement falls to a more recent review in June 2011. Here, GAO report 11-465, criticizes the DOD and the Office of the Undersecretary of Defense-Intelligence (USD-I) in failing to meet the requirement to develop a comprehensive plan and report back as was directed by the congressional oversight committees.²⁷ The obligation placed on USD-I in 2003 was to create an integrated plan for the DOD’s ISR enterprise, and would be called the ‘ISR-Integration Roadmap’. In response, the DOD presented a partial answer in 2005 and again in 2007, neither of which met the requirements placed upon it by the GAO. As a result, congressional intervention persuaded USD-I of the need for a holistic plan for ISR remained and, in turn, received a third edition of the roadmap in March 2010.²⁸ This integration is an attempt to reconcile the complex organizational ecosystem that constitutes the DOD ISR enterprise. The modern enterprise remains a reflection of Cold War-era threats that

²⁵ Lt Col John M. Harrison, "Effective and Efficient Use of USAF Airborne ISR and How to Meet Combatant Commander Requirements" (Air War College Graduation Requirement, Air University, February 2009), pp. 10. This information is drawn directly from the document written by Lt Col Harrison and utilizes his previously cited material

²⁶ Harrison, "Effective and Efficient Use of USAF Airborne ISR and How to Meet Combatant Commander Requirements," pp.10. This is as quoted and written by Lt Col Harrison

²⁷ Government Accountability Office GAO, Intelligence, Surveillance, and Reconnaissance: Actions Are Needed to Increase Integration and Efficiencies of DOD’s ISR Enterprise GAO-11-465, (Washington D.C.: GAO, June 2011), <http://www.gao.gov/new.items/d11465.pdf>. pp. 5.

²⁸ GAO, *Intelligence, Surveillance, and Reconnaissance: Actions Are Needed to Increase Integration and Efficiencies of DOD’s ISR Enterprise GAO-11-465*. pps. 5-6.

remained in relative balance based on a singular major threat. This compartmented structure, in response to the modern range of military operations, has “proved to be a hindrance once the nation became engaged in fighting non-traditional threats.”²⁹ This creates an environment where various organizations not only compete for resources that may be redundant, but also create definitions and doctrines that lead to confusion and disarray among operators and decision makers.³⁰

Methodology

This thesis will focus on three distinct time-periods and answer three baseline questions in order to provide an examination of the utilization of ISR in US strategy from 1990 to 2012. This examination will identify: 1) The key elements that explained the nature of individual National Security Strategies (NSS), 2) The key elements as described in the National Military Strategy (NMS), and 3) How the US Air Force provide capabilities meeting the nation’s requirements for ISR. These help explain the reported shortfall in ISR as captured in the GAO reports and COCOM urgent operational requests, and assist the DOD and Air Force in better forecasting the need for reformation within the service.

The three distinct time-periods are 1990-1999, 2000-2009, and 2010-2012. Each period highlight a distinctive environment event that precipitated strategic change, but, more importantly, each will also feature details on the United States Air Force’s presentation of mission design series (MDS) platforms to support the NSS and NMS.

²⁹ Thompson, *U.S. Air Dominance in a Fiscally-Constrained Environment: Defining Paths to the Future-Intelligence, Surveillance, and Reconnaissance*. pp. 7. Loren Thompson reviews many of the “old think” paradigms that impact future ISR requirements as a function of the old construct of organizations that currently dominates the DOD

³⁰ (DSB), *Counterinsurgency (COIN) Intelligence, Surveillance, and Reconnaissance (ISR) Operations*. pp. 13.

The key elements of each NSS will be a breakdown of the 1) Broad National Interests, 2) Regional Challenges and Responses, and 3) Defense Agenda. Each of these elements were chosen as a framework, because they are equally represented among each version of NSS and are connected to the eventual creation of National Military Strategy. The examination of five National Military Strategy's (NMS) will focus on these key elements: 1) National Military Objectives, 2) Strategic Elements/Desired Attributes, and 3) Capability Focus. Additionally, this analysis will include an evaluation of how Air Force doctrine connected to strategy and the key elements of 1) Roles and Missions, 2) Tenets, and 3) Operational Functions.

Definitions, Strategic Documents, and Air Force Strategy and Guidance

This section helps illustrate some key definitions and documents critical for this thesis. The key documents are the National Security Strategy (NSS), National Military Strategy (NMS), and Air Force guidance.

Definition of National Security Strategy

The National Security Strategy (NSS) is a direct result of the Goldwater-Nichols Defense Department Reorganization Act of 1986. This legislation mandated that the NSS must contain three elements: 1) a comprehensive characterization of both the foreign policy towards worldwide commitments and the national defense capabilities of the United States, 2) the anticipated short and long term uses of the elements of national power required to protect and promote the stated broad national objectives, 3) an assessment of the capabilities of the United States to implement the national security

strategy.³¹ For this thesis, the National Security Strategy is considered the grand strategic level guidance and serves as the path marker for the National Military Strategy, as well as subsequent guidelines and doctrines. Four Presidents cover the time period examined here: President George H.W. Bush (1989-1993), President William J. Clinton (1993-2001), President George W. Bush (2001-2009), and President Barrack Obama (2009-present).³² There are 10 different NSS documents in this study, dated 1990, 1991, 1993, 1996, 1997, 2000, 2002, 2006, and 2010.

Definition of National Military Strategy

The National Military Strategy (NMS) is the guiding document that *directs* the Joint Force's strategic plans, capabilities development, and *informs* the public on DOD activities, interagency focus, and other defense related materials. It is the source document of an overarching strategic planning process that enables the Chairman of the Joint Chiefs to execute his formal responsibilities specified in Title 10 U.S. Code.³³ Seven Chairmen of the Joint Chiefs of Staff cover the examination period of 1990 – 2012: Generals Colin Powell (1989-93), John Shalikashvili (1993-97), Hugh Shelton (1997-2001), Richard Myers (2001-05), Peter Pace (2005-07), Admiral Mike Mullen (2007-11), and General Martin Dempsey (2011-Current). However, there are currently

³¹ Eric S. Moore, "Chapter 1: History of the "National Security Strategy of the United States", " ed. Richard Friedman, Winter 2009 ed., vol. Winter 2009: Volume 19, Issue 1, *The National Strategy Forum Review-Online Winter 2009: Volume 19, Issue 1* (Chicago, IL: The National Strategy Forum, 2009),

<http://www.nationalstrategy.com/Portals/0/documents/Winter%202009%20NSFR/Chapter%201.pdf> (accessed 2 November 2012). pp. 1.

³² This information available at <http://www.whitehouse.gov/about/presidents>

³³ Richard M. Meinhart, "National Military Strategies: A Historical Perspective 1990 to 2012," in *National Security Policy and Strategy Volume II 5th Edition*, ed. Jr. J. Boone Bartholomees, *U.S. Army War College Guide to National Security Issues* (Carlisle Barracks, PA: U.S. Army War College Strategic Studies Institute, June 2012), pps. 83-84, 90. The 7th Chairman is added to the information contained in this reference in order to bring the total to a more current state.

only five different NMS available for examination, dated 1992, 1995, 1997, 2004, and 2011.

The 1997 National Military Strategy (NMS) explains the integration of NMS and the NSS. The NSS provides grand strategy and overarching national goals and objectives to the NMS, which ultimately describes how the military capabilities of the services will be used to support the national security objectives.³⁴

As seen in Figure 1, the NMS describes the objectives, concepts, tasks, and capabilities necessary to implement the goals set by the NSS. It also evolves as the international environment, national strategy, and national military objectives change. This examination will explore those changes and help determine if they adequately informed Air Force Doctrine, in terms of ISR requirements tied to national security.

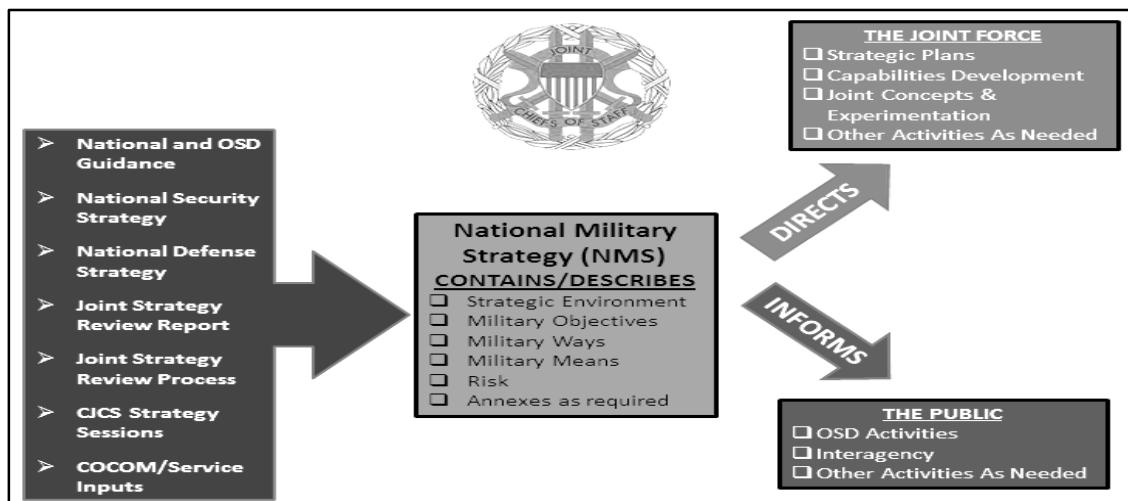


Figure 1 National Military Strategy (NMS) Inputs and Products
Source: Adapted from chart in U.S. Army War College Guide to National Security Issues Vol 2: National Security Policy and Strategy," ed J. Boone Bartholomees Jr. page 83

³⁴ General John M. Shalikashvili, The National Military Strategy of the United States of America-1997: Shape, Respond, Prepare Now-A Military Strategy for a New Era, (Washington, DC: Office of the Chairman of the Joint Chiefs of Staff, September 1997), <http://history.defense.gov/resources/nms1997.pdf> (accessed 13 Dec 2012). pp. 6. Information taken directly out of the chart at the top right of the page.

United States Air Force Doctrine, Strategy, and Guidance

Air Force Doctrine Document 1-1 presents the guiding principles of the service, opportunities for the future, provides the warfighting concepts that describe the essence of airpower, and provide the Airman's perspective to the Joint community.³⁵ For the Air Force, AFDD 1-1 is a carefully developed group of ideas that provides a common framework for warfighters, includes actions across the range of military operations, and describes the proper use of airpower.³⁶ "Strategy defines how operations should be conducted to accomplish national policy objectives. Strategy is the continuous process of matching ends, ways, and means to accomplish desired goals within acceptable levels of risk. Strategy originates in policy and addresses broad objectives, along with the designs and plans for achieving them."³⁷ This strategy can be derived not only by the AFDD 1-1 versions examined in this thesis, but from additional guidance documents utilized throughout this research.

One such document is the Quadrennial Defense Review (QDR). The QDR is a legislatively mandated review of the DOD and established by the National Defense Authorization Act (NDAA) FY'97. It states:

The Secretary of Defense shall every four years conduct a comprehensive examination of the national defense strategy, force structure, force modernization plans, infrastructure, budget plan, and other elements of the defense program and policies of the United States with a view toward

³⁵ USAF, *Air Force Basic Doctrine: Air Force Doctrine Document-1 - 1997*, ed. HQ AFDC/DR Lt Col Donald R. Poynor, certified by HQ AFDC/CC Maj Gen Ronald E. Keys, and approved by Chief of Staff General Michael E. Ryan, AFDD-1 (Maxwell AFB, AL: Headquarters Air Force Doctrine Center, September 1997). opening statement by General Ryan, Chief of Staff of the Air Force.

³⁶ USAF, *Air Force Basic Doctrine, Organization, and Command: Air Force Doctrine Document-1 - 2011*, ed. LeMay Center/DDS, certified by LeMay Center /CC Maj Gen Thomas K. Anderson, and approved by Chief of Staff General Norton A. Schwartz (Maxwell AFB, AL: Headquarters Air Force Doctrine Center, November 2011). pps. 2-3.

³⁷ USAF, *Air Force Basic Doctrine, Organization, and Command: Air Force Doctrine Document-1 - 2011*: pp. 4.

determining and expressing the defense strategy of the United States and establishing a defense program for the next 20 years.³⁸

The NDAA FY'93 added the requirement to publish the QDR in conjunction with the associated fiscal/presidential budgets. The FY'08 amended legislation for QDR 2010 to include an examination of the DOD's responsiveness to climate change and nature disasters. The QDRs utilized in this thesis are from 1997, 2001, 2006, and 2010. Thus, the QDR is not part of the initial discussion that follows in the period 1990-1999.

³⁸ (DOD) Department of Defense, "US Department of Defense - QDR 101: What You Should Know," in electronic format <http://www.isn.ethz.ch/isn/Digital-Library/Publications/Detail/?ots783=0c54e3b3-1e9c-be1e-2c24-a6a8c7060233&lng=en&id=32542> ed. (DOD) Department of Defense (Washington, DC: U.S. Department of Defense Office of Public Affairs, January 2010), pp. 1.

Chapter 2

National Security, Military Strategy, and Air Force Doctrine 1990 – 1999

What enables the wise and sovereign and the good general to strike and conquer, and achieve things beyond the reach of ordinary men, is foreknowledge.

Sun Tzu
The Art of War

Decision makers' requirements are based on their known interests and the intelligence system is optimized to find out more about what decision makers are already interested in. It is not very effective in introducing new interests for consideration or action.

Steven W. Peterson¹

Because of the Cold War-era's strategic focus on an anticipated war with the Soviet Union, airpower advocates failed to consider a wider spectrum of conflict that could potentially confront the United States military. 'Low intensity' conflicts such as Vietnam, presented the Strategic Air Command dominated Air Force with an asymmetric guerilla war fought by adaptive ideological extremists. This in no way diminishes the strategic primacy of deterring the Soviet Union. Nonetheless, while the Air Force operated with the "advantage of a galaxy of weapons developed through decades of war," doctrine and some platforms lacked the inherent ability to quickly transition from containment and major combat operation (MCO) forces to limited wars like Vietnam.² David Lonsdale illustrates this by stating:

The proclivity within the United States towards precision

¹ Steven W. Peterson, "US Intelligence Support to Decision Making," in *Research Paper available at <http://programs.wcfia.harvard.edu/files/fellows/files/peterson.pdf>* (accessed 14 January 2013) (Cambridge, MA: Weatherhead Center for International Affairs-Harvard University, July 2009), pp. 27.

² Stephen P Randolph, *Powerful and Brutal Weapons: Nixon, Kissinger, and the Easter Offensive* (Cambridge, MA: Harvard University Press, 2007). pp. 2.

bombing may be a reflection of the belief in technological answers. Whatever the particular origins of a doctrine, history reveals that loyalty to the established methods can shape a campaign regardless of the specific requirements of the war in question. Prior to Vietnam, the USAF had prepared to fight a nuclear war against the Soviet Union. Consequently, the doctrinal manual for 1964, the year before Rolling Thunder began, included no provisions for strategic bombing without nuclear weapons.³

However, the Cold War mentality still drove the United States to focus on what it believed to be its main purpose, to prevent or win a war with the Soviet Union. U.S. strategy and the associated operations plans (OPLANS) were centered on the fact that “the likelihood of Soviet intervention in regional crisis would be high, that any regional conflict with the Soviets would [escalate] to a global war, and that the main theater of war would be Europe.”⁴ No doubt, military strategists pondered the multitude of options that lay before them, which may or may not have been precipitated by some sort of preemptive nuclear strike. The fault in this planning did not necessarily fall in these plans, but in the plans’ regard for information. The intelligence utilized by the United States and its allies failed to account for the global shift that fractured the relative stalemate between the world superpower . . . the collapse of the Soviet Union.

Colonel Harry Rothmann, who served as the Chief Strategy Application Branch with the J-5, completed a study in 1992 that outlined the major shifts in the geostrategic environment during the major departure from the Cold War strategies. He states:

Major changes in the security environment demand changes in the war we view the pursuit of [national security] objectives. With the demise of communism and the breakup of the Soviet Union into a

³ David J. Lonsdale, *The Nature of War in the Information Age: Clausewitzian Future Strategy and History*, ed. Colin Gray and Williamson Murray (London: Frank Cass, 2004). 155.

⁴ Harry E. Rothman, Forging a New National Military Strategy in a Post Cold War: A Perspective from the Joint Staff, (Carlisle Barracks, PA: U.S. Army War College Strategic Studies Institute, 1992), <http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA249319> (accessed 3 Feb 2013). 5.

Commonwealth of Independent States (CIS), the administration has argued that U.S. security policy has significantly shifted from containment to engagement. . . This significant shift in policy, reflecting not only dramatic changes but also enduring realities, is fundamental to the new military strategy. Indeed, this new policy and its associated geopolitical changes *necessitate changing the focus from a threat-based strategy to one that is interest and capability based* (emphasis added). In addition, the end of the Cold War has shifted the U.S. strategic purpose from one of waging a global war against the Soviets to one of managing regional matters of vital interest.⁵

His research and characterization of the changing environment is critical. The Soviet/bipolar superpower scenario would be no more, and a need to shift into a range of military operations would dominate strategy planning in the 1990-1999 period.

The Joint Staff recognized the need for a revitalized look at potential threats in the post-Cold War era and moved to update the long-standing Joint Strategic Capabilities Plan (JSCP). This update would now take into account analysis provided by the intelligence community, which drove additional modification in the parsing of responsibilities. This emphasis would be on regional planning instead of global war, moved away from countering Soviet threats in third world countries, and specifically focused on the emerging significance of the Pacific as well as Central and South America.⁶ This followed on the heels of the National Security Review (NSR) 12 issued by President George Bush in 1989, which directed a complete assessment of the national defense strategy.⁷ The JSCP would now focus on the strategic agility and decisive force that each service could provide to decision makers.

National Security Strategy (NSS) 1990-1999

Presidents George H.W. Bush and William Clinton served as the only two

⁵ Rothman, *Forging a New National Military Strategy in a Post Cold War: A Perspective from the Joint Staff*. 2-3.

⁶ Lorna S. Jaffe, "The Development of the Base Force 1989-1992," (Washington DC: Joint History Office, Chairman of the Joint Chiefs of Staff, July 1993), 3.

⁷ Jaffe, "The Development of the Base Force 1989-1992," 3.

Presidents and architects of National Security Strategy between 1990 and 1999. This period found the United States dependent on alliances such as the North Atlantic Treaty Organization (NATO), and a “robust nuclear deterrent, that included a forward defense with many forces deployed overseas, particularly in Europe and Korea.”⁸ This era experienced a vast range of international conflicts, including the collapse of the Soviet Union, the Persian Gulf War, guerilla warfare in Somalia and Haiti, and ended with the Kosovo campaign. As a result, both President Bush and Clinton needed to identify and command the nation through the post-Cold War period of instability and navigate the range of threats that challenged U.S interests.

The 1990 NSS opens with remarks from President George H.W. Bush about the impending fall of the Soviet Empire, the success of the United States, and, by extension, the triumph of the western democratic way of life. He stated, “Today, after four decades, the international landscape is marked by change that is breathtaking in its character, dimension, and pace. The familiar moorings of postwar security policy are being loosened by developments that were barely imagined years or even months ago . . . It is our steadfastness over four decades that has brought us to this moment of historic opportunity.”⁹ The bi-polar stability would no longer act as the *de-facto* hegemonic government in being, and the vacant seat of power opened the door for what continues to be a struggle for regional authority.

Regional authority would find a significant challenger in late 1990 and would

⁸ Marybeth P. Ulrich, "American Values, Interests, and Purpose: Perspectives on the Roots of American Political and Strategic Culture," in *National Security Policy and Strategy Volume II 5th Edition*, ed. Jr. J. Boone Bartholomees, *U.S. Army War College Guide to National Security Issues* (Carlisle Barracks, PA: U.S. Army War College Strategic Studies Institute, June 2012), pp. 4.

⁹ President George H.W. Bush, National Security Strategy of the United States-1990, (Washington, DC March 1990), <http://nssarchive.us/NSSR/1990.pdf> (accessed 9 Dec 2012). opening statement

kick start the fire that has ultimately consumed the United States in the Middle East for over 20 years. The first Gulf War resulted from the invasion of Kuwait by Iraqi forces under the dictatorial control of Saddam Hussein. The invasion was in direct support of his quest to expand his authority into the lower Gulf States and gain a larger control of the oil trade. The field of battle offered by the deserts of Iraq was significantly different from the ground war the United States had envisioned in Europe. Additionally, the Persian Gulf now offered the United States Navy an avenue in which to employ maritime power, which added a new dynamic to the joint warfare environment. In terms of Air Force ISR, the systems and capabilities placed forward would need to be interoperable and/or process data in formats useable by the sister services.

Table 1 Key Elements of 1990 National Security Strategy

<u>Broad National Interests</u>	<u>Regional Challenges and Responses</u>	<u>Defense Agenda</u>
<p>1. Survival of the United States as a free and independent nation, with its fundamental values intact and its institution and people secure</p> <p>2. A healthy and growing U.S economy to ensure opportunity for individual prosperity and a resource base for national endeavors</p> <p>3. A stable and secure world, fostering political freedom, human rights, and democratic institutions</p> <p>4. Healthy, cooperative and politically vigorous relations with allies and friendly nations</p>	<p>1. Soviet Union-seek to create an atmosphere of cooperation and open trade</p> <p>2. Western Europe – maintain a substantial American presence both militarily and politically</p> <p>3. Eastern Europe – overcoming the division of Eastern Europe is key, as well as expectations that the Soviet Union will support a more united Europe</p> <p>4. The Western Hemisphere –promote democracy and counter the disruptive Communist insurgencies that exist. Support new legitimate governments and continue to cooperate with Canada and Mexico</p> <p>5. East Asia and the Pacific- seek to avoid a total cutoff of ties with China that post global and regional issues</p> <p>6. The Middle East and South Asia- maintain vigilance in the area that presents a danger to the U.S. oil interests</p> <p>7. Africa- help develop economically and stress for the peaceful resolution of interior governmental issues</p>	<p>1. Deterring Nuclear War</p> <p>2. Deterring Conventional War</p> <p>3. Chemical Warfare</p> <p>4. Space</p> <p>5. Low-Intensity Conflict</p> <p>6. Drug Trafficking</p> <p>7. Intelligence Program – “U.S Intelligence must be responsive to a changing hostile intelligence threat, and must remain the alarm bell to give us early warning of new development and new dangers even as requirements grow in number and complexity. Our intelligence capabilities must be ready to meet the new challenges, to adapt as necessary, and to support U.S. policy in the 1990’s.”</p> <p>8. Planning for the future</p>

Source: This table adapted from 1990 NSS pages 2-3, 9-14, and 23-30

The key elements of the 1990 NSS, which this paper will use as a

comparative framework for analysis, are the 1) *Broad National Interests*, 2) *Regional Challenges and Responses*, and 3) *the Defense Agenda*. Table 1 is the combination of these key elements that contain the critical comparative underpinnings.

The remarkable theme prevalent throughout this document illustrates the role that the Soviet Union, and by extension the pervasive nuclear threat, still dominated U.S. national security thinking. The top issue in each key element is consistent in their message of assuring the survival of the United States, answering the challenge of the Soviet Union, and deterring nuclear weapons. In terms of ISR, the nation required a method to maintain a vigilance upon the wide expanse of East and West Europe, while providing a robust capability in pre- and post-nuclear operations.¹⁰

Table 2 Key Elements of 1991 National Security Strategy

<u>Broad National Interests</u>	<u>Regional Challenges and Responses</u>	<u>Defense Agenda</u>
<ol style="list-style-type: none"> 1. The survival of the United States as a free and independent nation, with its fundamental values intact and its institutions and people secure. 2. A healthy and growing U.S. economy to ensure opportunity for individual prosperity and resources for national endeavors at home and abroad 3. Healthy, cooperative and politically vigorous relations with allies and friendly nations 4. A stable and secure world, where political and economic freedom, human rights and democratic institutions flourish 	<ol style="list-style-type: none"> 1. The Soviet Future- the end of Soviet domination has transformed Europe and has diminished the counter-American ideology 2. The Growing Roles of Germany and Japan – one of the most important developments is the emergence of 2 new political and economic leaders 3. The New Europe – they will be the key to global balance and is experiencing fundamental change 4. The Western Hemisphere- maintain balance and address narco-terrorist actions in South America 5. East Asia and the Pacific-maintain focus on South Korean and Japanese relations 6. The Middle East and South Asia-repair the damage of a post-Gulf War environment 7. Africa-address the population strife 	<ol style="list-style-type: none"> 1. Nuclear Deterrence 2. Forward Presence 3. Crisis Response 4. Reconstitution 5. A Smaller and Restructured Force

Source: This table adapted from 1991 NSS pages 3-4, 5-11, and 25-31

¹⁰ Reference Table 1 Key Elements of 1990 National Security Strategy . . . ‘Defense Agenda’ item number 7

The 1991 NSS describes a new age in the global power dynamic that was easily recognized as east versus west, communism versus democracy, and a war envisioned through the worldwide rhetoric by the two greatest nuclear powers. The new world order explained by President Bush was an aspiration and an opportunity to build a new international scheme based on American ideals.¹¹ However, the end of the U.S.S.R. produced a different milieu, one epitomized by the actions of Saddam Hussein and the first Gulf War. Weak intelligence and related resources were not able to provide an accurate assessment of Saddam's intent and left a large gap in attempting to assess his true intentions after the 1980 – 1988 Iran-Iraq War.¹²

Of note in this new strategy, the focus on intelligence programs is removed from the defense agenda and made a singular focus group within the NSS itself. The ability for American intelligence capabilities to reach globally, and maintain an eye on the proliferation of arms was deemed a “unique national asset” and the caution regarding increased regional turmoil placed a premium on the “growing burdens on intelligence collection, processing, and analysis.”¹³ The need and direction were clear for the focused pursuit of ISR capabilities that could provide leadership with the situational awareness required in the new world order.

The National Security Strategy of 1992 faced an issue that would haunt several of the next versions of U.S. grand strategy. This phenomenon was purely the result of the unfortunate political back-and-forth surrounding election years and party differences. The transition out of the Cold War and the 1991 NSS call for a ‘reconstitution’ and a

¹¹ Bush, *National Security Strategy of The United States-1991*. pp. 1.

¹² Zachary Karabell and Philip Zelikow, "Prelude to War: US Policy Toward Iraq 1988-1990," website, 2013(Jan 1994), <http://academic.brooklyn.cuny.edu/history/johnson/iraqcse.htm> (online article accessed 31 Mar 2013). No pages available. This article was utilized in an online format only.

¹³ Bush, *National Security Strategy of The United States-1991*. pp. 16.

‘smaller and restructured force’ were signals of a shift from containment to one of collective engagement.¹⁴ This shift would place an increased dependence on the global community in terms of providing capabilities and resources. Additionally, the lack of a dedicated 1992 NSS meant that the 1993 version would not only encompass what President Bush considered as enduring principles, but now would act as “markers by which the Clinton administration’s foreign policy could be judged.”¹⁵

The NSS of 1993 served as President Bush’s farewell to the nation. This version, along with the proposed national budget, was delivered to Congress on his last day of office and lays out the call for a fundamental shift in the focus of the U.S. grand strategy.¹⁶ Internally, the document reads as an historical view of the Bush presidency illuminating the monumental accomplishments of the government under his leadership. This includes the decline in communist strength in Europe, an increased commitment by the multilateral institutions of NATO and the UN, and an opportunity to promote our interests globally.¹⁷

Regarding the intelligence portion, the 1993 NSS outlines the requirement for the maintenance of both technical and human resources that are flexible, adaptable, and capabilities must be pursued that provide the requisite solutions to hostile actor evolutions. The demand for efforts that make DOD intelligence and inter-agency operations more effective and efficient seem persistent when considering the subsequent

¹⁴ Don M. Snider, "The National Security Strategy: Documenting Strategic Vision," ed. Marianne P. Cowling (Carlisle Barracks, PA: U.S. Army War College-Strategic Studies Institute, March 15, 1995), pp. 10.

¹⁵ Snider, "The National Security Strategy: Documenting Strategic Vision," pp. 9.

¹⁶ Lieutenant Colonel Michael A. Wormley, Steady Security: Consistency in National Security Strategy Ends, (Fort Leavenworth, KS: School of Advanced Military Studies, United States Army Command and General Staff College, April 2010), <https://www.hSDL.org/?view&did=712668> (accessed on 6 Jan 2013). pps. 14-15.

¹⁷ President George H.W. Bush, National Security Strategy of the United States-1993, (Washington, DC: The White House, January 1993), <http://nssarchive.us/NSSR/1993.pdf> (accessed 9 Dec 2012). pp. 2.

GAO reports utilized in this examination.¹⁸

Additionally, the new focus on terrorism as a rising threat to U.S. security appeared as a separate emphasis within the 1993 NSS (see table 3). Sadly, the focus was on the international side of terrorism and offered generic policies that outline the U.S. position on hostage situations. The policy lacks any ideas on domestic actions and security. Unfortunately, Somali tribesmen linked to Al-Qaeda attack US forces in Mogadishu, while Ramzi Yousef attacked the World Trade Center killing eight people and injuring a thousand, and Omar Abdel Rahman was arrested for planning attacks against New York City targets.¹⁹

Table 3 Key Elements of 1993 National Security Strategy

Broad National Interests	Regional Challenges and Responses	Defense Agenda
<ol style="list-style-type: none">1. Global and regional stability which encourages peaceful change and progress<ol style="list-style-type: none">a. Protect the citizensb. Strengthen treaties and defense arrangementsc. Avoid anti-American regional hegemonsd. Limit proliferation of weapons and strengthen civil institutions2. Open, democratic and representative political systems worldwide3. An open international trading and economic system which benefits all participants4. Create and enduring global faith in America—it can and it will lead in a collective response to the world's crises	<ol style="list-style-type: none">1. Lead at the United Nations – provide the needed resources and capabilities for wide ranging security council requirements2. Europe- strengthen NATO and promote mutual security3. Former Soviet Union-assist in new Eurasian state growth and decrease tensions in Balkans4. Asia- “5 fold plan”<ol style="list-style-type: none">a. Maintain Japanese alliance and growthb. Expand the markets into regionc. Monitor the growth of Chinad. Continue South Korean supporte. Encourage normalization of Indochina5. Latin America – focus on new states6. Africa – work for African unity7. Middle East – continue the U.S. peace process and foster regional cooperation and open negotiations	<ol style="list-style-type: none">1. Strategic Deterrence and Defense – Deterring nuclear attack remains our top priority2. Forward Presence3. Crisis Response4. Reconstitution

Source: This table adapted from 1993 NSS pages 3, 7-8, 14, and 18

The two domestic examples of terrorism illustrated the need for both international and domestic security. This also served as a precursor for a need to provide ISR on both

¹⁸ Bush, *National Security Strategy of the United States-1993*. pp. 18.

¹⁹ Peterson, "US Intelligence Support to Decision Making," pp. 14.

a strategic scale as well as the ability to follow targets at the tactical level in an urban environment. The events that take place eight years later show the impacts of a group of individuals against a nation concerned with national threats abroad.

The 1994 National Security Strategy marked the transition from the Presidency of George H.W. Bush to that of William J. Clinton. The overall message still emphasized the importance of United States interaction around the globe and assisted the newly freed states of the former Soviet Union in their transition to a radically different Eastern Europe. The overall transformation from a world dominated by the threat of nuclear annihilation now shifted to a new era of globalization and prosperity.²⁰

Table 4 Key Elements of 1994 National Security Strategy

Broad National Objectives	Regional Challenges and Responses	Defense Agenda
<p>1. Enhancing Our Security-Taking account of the realities of the post-Cold War era and the new threats, a military capability appropriately sized and postured to meet the diverse needs of our strategy, in concert with regional allies, <i>to win two nearly simultaneous major regional conflicts.</i></p> <p>2. Promoting Prosperity at Home- A vigorous and integrated economic policy designed to stimulate global environmentally sound economic growth and free trade and equal U.S. access to foreign markets</p> <p>3. Promoting Democracy-A framework that increases our security by protecting, consolidating and enlarging the community of free market democracies. Our efforts focus on preserving democratic processes in key emerging states of the former Soviet Union.</p>	<p>1. Europe and Eurasia – the strategy of enlargement and engagement is central to the area. Security will be through military strength and cooperation. NATO will act as the responsible agency</p> <p>2. East Asia and the Pacific – the U.S. envisions a New Pacific Community, which is the embodiment of evolved economic stability, democratic processes, and increases human rights.</p> <p>3. The Western Hemisphere – must control insurgencies, support NAFTA arrangements, and work with non-govt organizations to support peaceful internal order</p> <p>4. The Middle East, Southwest and South Asia – monitor U.S. interests in the Middle East through continued U.S presence</p> <p>5. Africa – our greatest challenge for engagement and enlargement</p>	<p>1. Dealing with Major Regional Contingencies</p> <p>2. Provide a Credible Overseas Presence</p> <p>3. Countering Weapons of Mass Destruction</p> <p>4. Contributing to Multilateral Peace Operations</p> <p>5. Supporting Counterterrorism Efforts and Other National Security Objectives</p>

Source: This table adapted from 1994 NSS pages 5-7, and 21-26

An examination of Table 4 reveals a key doctrinal message regarding both the

²⁰ President William J. Clinton, A National Security Strategy of Engagement and Enlargement-1994, (Washington, DC: The White House, July 1994), <http://nssarchive.us/NSSR/1994.pdf> (accessed 9 Dec 2012). pp. 1.

‘broad national objectives’ and the ‘defense agenda’, namely the codified language on dealing with two nearly simultaneous major regional conflicts. Military capabilities would have to be robust and flexible enough to enter into entirely different theaters and match an unknown combination of threats. In terms of ISR, there was a fundamentally different call for the increased need for military intelligence gathering capabilities. The message to the security community is clear . . . the U.S. needs a “strong intelligence effort that can provide adequate warning of threats to national security” that can provide military commanders with the requisite level of battlefield intelligence, and must include a strong analysis organization utilizing the latest in imagery intelligence (IMINT) assets.²¹

The National Security Strategy of 1995 continued President Clinton’s overall message of ‘engagement and enlargement’ but adds criteria on the overall utilization of military forces as an extension of U.S. policy. The contextual environment for the White House included the ongoing struggle in Bosnia and Kosovo, the after effects of Somalia, and the intervention in Haiti. The relationship between the Russian government and the United States had turned into one that arguably could have been unpredictable just five years prior. U.S. astronaut Norman Thagard exemplified this post-Cold War shift and profoundly changed the nature of cooperation between two previous opponents. He is the first American to train and fly on a Russian made spacecraft, and was the first American to board the Russian Mir Space Station.²² The world, and now space, had radically changed from the beginning of the decade.

In 1995, the dangers to the United States were now more diverse, “ethnic

²¹ Clinton, *A National Security Strategy of Engagement and Enlargement-1994*. pp. 14.

²² Noel Romero, “International Space Hall of Fame,” *New Mexico Museum of Space History*(1996), <http://www.nmspacemuseum.org/halloffame/detail.php?id=133> (accessed 20 Mar 2013).

conflict is spreading and rogue states pose a serious danger to regional stability in many corners of the globe" while the "proliferation of weapons of mass destruction represents a major challenge to our security."²³ Adequate military forces were judged vital for the national strategy of being able to fight two major wars and a global responsibility for security. Terrorism remained as a focus as well and the method for effectiveness in countering this threat hinged on the continuous improvement of intelligence and surveillance capabilities and analytical organizations.²⁴

Table 5 Key Elements of 1995-1996 National Security Strategy

Broad National Objectives	Regional Challenges and Responses	Defense Agenda
<p>1. Enhancing Our Security-Taking account of the realities of the post-Cold War era and the new threats, a military capability appropriately sized and postured to meet the diverse needs of our strategy, in concert with regional allies, <i>to win two nearly simultaneous major regional conflicts.</i></p> <p>2. Promoting Prosperity at Home- A vigorous and integrated economic policy designed to stimulate global environmentally sound economic growth and free trade and equal U.S. access to foreign markets</p> <p>3. Promoting Democracy-A framework that increases our security by protecting, consolidating and enlarging the community of free market democracies. (*same as 1994)</p>	<p>1. Europe and Eurasia – the strategy of enlargement and engagement is central to the area. Security will be through military strength and cooperation. Success in Bosnia serves as an example of U.S. leadership</p> <p>2. East Asia and the Pacific – key location hinging on U.S. three broad national objectives. Focus on nuclear security on the Korean Peninsula and throughout Asia.</p> <p>3. The Western Hemisphere – must control insurgencies, support NAFTA arrangements that build pro-democratic stability and deter insurgencies</p> <p>4. The Middle East, Southwest and South Asia – monitor U.S. interests in the Middle East through continued U.S. presence and a dual containment strategy regarding Iraq and Iran</p> <p>5. Africa – remains our greatest challenge for engagement and enlargement</p>	<p>1. Dealing with Major Regional Contingencies</p> <p>2. Provide a Credible Overseas Presence</p> <p>3. Counteracting Weapons of Mass Destruction</p> <p>4. Contributing to Multilateral Peace Operations</p> <p>5. Supporting Counterterrorism Efforts and Other National Security Objectives</p> <p>(*same as 1994)</p>

Source: This table adapted from 1995-1996 NSS pages 7-10, and 25-31

The NSS of 1995, as seen here in Table 5, illustrates a steady and constant message to the security organizations within the United States regarding the national

²³ President William J. Clinton, A National Security and Strategy of Engagement and Enlargement-1995, (Washington, DC: The White House, February 1995), <http://nssarchive.us/NSSR/1995.pdf> (accessed 9 Dec 2012). pp. i.

²⁴ Clinton, *A National Security and Strategy of Engagement and Enlargement-1995*, pp. 10.

objectives as well as the defense agenda. In the case of these two key elements, they largely remain consistent from the previous year, signaling President Clinton's, and his administration's intent, to provide a clear path throughout his term. The benefit for organizations such as the DOD, the individual services, and industry, was a secure anchor point that assisted in stable development and forecasting. Additionally, this document remains consistent in declaring intelligence as a major focal point. It states, "We will continue to monitor military and technical threats, to guide long-term force development and weapons acquisition, and to directly support military operations. Intelligence will also be critical for directing new efforts against regional conflicts, proliferation of WMD, counterintelligence, terrorism and narcotics trafficking."²⁵ However, the regional focus did change in three areas. In Europe, the Bosnian conflict became a testament to U.S. leadership, the Pacific focus now included the Korean Peninsula's nuclear surety as a key element, and a national doctrine of containment of Iraq and Iran, were all changes to the previous year's national agenda.

In 1996, the United States started negotiations with North Korea based on the progress made between the two governments the previous year. The U.S. also gained success in Rwanda and Somalia, where the administration noted, "Only the American military could have accomplished what it did in these humanitarian missions."²⁶ Additionally, the 1996 NSS stayed exactly in line vis-à-vis the three key elements from the previous year (1995 NSS) which again provided the DOD, the services, and industry a clear path for development and planning. However, the 1996 NSS did include a critical

²⁵ Clinton, *A National Security and Strategy of Engagement and Enlargement-1995*. pp. 24.

²⁶ President William J. Clinton, *A National Security Strategy of Engagement and Enlargement-1996*, (Washington DC: The White House, February 1996), <http://nssarchive.us/NSSR/1996.PDF> (accessed 13 Dec 2012). pp. iv.

fiscal point appropriate to the core of this research. President Clinton sent forth a Fiscal Year (FY) 1996-2001 defense budget that fully funded the force structure recommendations placed before the administration, requested a supplemental of \$1.7BN for FY94 and \$2.6BN for FY95, and \$25BN in addition to the DOD's request for FY 96-01 to provide more funding for readiness, modernization, and quality of life.²⁷ The President had made clear his intent to provide for national security, in terms of military capabilities, and fully expected a fully "qualified and motivated team, well-maintained equipment, sufficient support and sustainment capabilities, and timely intelligence."²⁸

The 1997 National Security Strategy moved away from 'Engagement and Enlargement' and would now be titled 'Strategy for a New Century' and served as a critical advancement in national guidelines over the previous years. This year's NSS, in comparison to the previous documents examined in this thesis, served as a major evolution in prioritization, description of future threats and types of potential conflicts, and a categorization of the critical U.S. national power requirements. From 1990-1996, the NSS contained an average of nine instances of labeling a particular item or topic as a 'priority' or 'priorities'. Through comparison, none provides a definable list of top to bottom rankings in terms of importance. Thus, they left abundant opportunity for interpretation in choosing a prospective cutoff point regarding fiscal priorities.

The principal advancement in the 1997 NSS was a change in the focus and amplification of the key elements (broad national objectives, regional challenges and responses, and defense agenda) contained within the document. The overall theme centered on the strategic terms of shape, respond, and prepare now. The newly

²⁷ Clinton, *A National Security Strategy of Engagement and Enlargement-1996*. pp. 4.

²⁸ Clinton, *A National Security Strategy of Engagement and Enlargement-1996*. pp. 14.

prioritized goals synthesized the desires of the national objectives. First, there is a concentration on Europe as a mirror to the democratic view of the United States. This would be accomplished through the partnership of NATO and Russia, focusing on the regional conflicts such as those in Bosnia, and leveraging the global capabilities provided by the United States. Second, America would focus on another regional conflict in maintaining the North/South Korean armistice, focus on the Asia Pacific economic stability, and deal with the human rights issues internal to China. Third, there is a focus on the continued prosperity of the global economy, maintaining America's world-leading contributions in agriculture and aviation, while maintaining an eye on small volatile markets such as Latin America and the Caribbean. Fourth, America must continue to focus on the Middle East and Central Africa by utilizing stabilization forces. Fifth, the U.S. must maintain a capability against terrorism, arms trafficking, drugs, weapons of mass destruction, and must continue nuclear disarmament with Russia. Finally, the U.S. needs the diplomatic and military capability to meet the challenges outlined by the previous five statements and increase funding for weapons modernization and military personnel.²⁹ Of note, each of these rank-ordered requirements essentially focuses on a certain type of security threat, the regional conflict.

Next, the 1997 NSS also provides for the first time in this examination, a description of future threats and types of potential conflicts. The Clinton administration uniformly articulated that the U.S. would:

conduct smaller-scale contingency operations to vindicate national interests. These operations encompass the full range of military operations short of major theater warfare, including humanitarian assistance, peacekeeping, disaster relief, no-fly zones, reinforcing key allies, limited

²⁹ President William J. Clinton, A National Security Strategy For A New Century-1997, (Washington, DC: The White House, May 1997), <http://nssarchive.us/NSSR/1997.pdf> (accessed on 12 Dec 2012). pps. 2-3.

strikes, and interventions. These operations will likely pose the most frequent challenge for U.S. forces . . . The U.S. military must also be prepared to do so in the face of challenges such as terrorism, information operations, and the threat or use of weapons of mass destruction. U.S. forces must also remain multi-mission capable and will be trained and managed with multiple missions in mind.³⁰

This did not alleviate the DOD from providing the nation with a force capable of dealing with a major theater of war, but in terms of planning and prioritizing, the strategy placed forward is clear and appropriately prioritizes the scope of conflicts. Regional conflict, initiated by smaller organizations, requires the U.S. to fight and win under conditions where an adversary may make unconventional approaches that avoid or undermine our dominance in the conventional military arena. These actions are likely to use asymmetric means, such as WMD, information operations, or terrorism.³¹

The third and last critical advancement in the 1997 NSS is the creation and articulation of overarching capabilities as a function of U.S. National Power. These five thematic capabilities translated into a prioritized defense agenda that deviated from simply naming broad goals in the previous versions. An analysis of the information contained within this new arrangement creates a clear call for the DOD to present a collective ISR force, especially now that intelligence is termed a critical element of national power.

The ISR capabilities of the DOD would be fundamental in providing the warning of threats through analysis and near-real time information, the ability to cover the entire spectrum of conflict and provide multi-theater accessibility, and prove utility against a wide range of threats that ranged from WMD through terrorism. Thus, the 1997 NSS stands as a watershed moment in the comparison of strategic guidance and national

³⁰ Clinton, *A National Security Strategy For A New Century-1997*. pp. 14.

³¹ Clinton, *A National Security Strategy For A New Century-1997*. pp. 14.

prioritization. As seen in Table 6, the document produced by the Clinton administration is clearly more applicable to the arrangement of capabilities and allows the DOD and the services to prioritize force structure additions or deletions based on the most critical elements of national power captured in the National Security Strategy of 1997.

Table 6 Key Elements of 1997-1998 National Security Strategy (1997 First with Named Priorities)

<u>Broad National Objectives</u>	<u>Regional Challenges and Responses</u>	<u>Defense Agenda (1997)</u>	<u>Defense Agenda (1998)</u>
<p>1. Enhancing Our Security 2. Promoting Prosperity at Home 3. Promoting Democracy</p> <p>New Priorities:</p> <ol style="list-style-type: none"> Focus on Europe Focus on the Pacific Focus on global economy and small markets of Latin America Maintain capabilities of dealing with regional conflicts Counter niche issues such as drugs, terrorism, and WMD Maintain a military able to meet challenges of non-major theater conflicts 	<p>1. Europe and Eurasia – the strategy of enlargement and engagement is central to the area. Security will be through military strength and cooperation and dependent on Russian assistance</p> <p>2. East Asia and the Pacific – Focus on nuclear security on the Korean Peninsula and throughout Asia. And maintain an eye on China as a continuous interest in the region</p> <p>3. The Western Hemisphere – must control insurgencies, and small emergent regional and inter-state conflicts</p> <p>4. The Middle East, Southwest and South Asia – monitor U.S. interests in the Middle East through continued U.S presence and a dual containment strategy regarding Iraq and Iran</p> <p>5. Africa – continue to support organic democratic progress made on the continent</p>	<p>1. Maintain a Focus on Regional or State-centered Threats</p> <p>2. Transnational Threats (terrorism, cross-border operations, drugs)</p> <p>3. Threats from Weapons of Mass Destruction</p> <p>Critical Military Elements of National Power³²</p> <p>1. Intelligence</p> <p>2. Space</p> <p>3. Missile Defense</p> <p>4. Information Infrastructure</p> <p>5. National Security Emergency Preparedness (NSEP)</p>	<p>1. Transnational Threats (terrorism, international crime, drug trafficking)</p> <p>2. Emerging Threats at Home (protect against terrorist groups based on conventional superiority)</p> <p>3. Smaller-Scale Contingencies</p> <p>4. Major Theater Warfare</p> <p>Critical Military Elements of National Power³³</p> <ol style="list-style-type: none"> Quality People 2. ISR Space Missile Defense NSEP Overseas Power Projections

Source: Table adapted from 1997 NSS pages 2-3, 8, 16, 23-32 and 1998 NSS pages 15-22 and 24-27

In February of 1998, South Korean President Kim Dae-Jung announced an effort to provide North Korea 50,000 tons of food aid in the hopes of furthering reconciliatory talks between the two nations. The effort proved fruitless, and the United States followed

³² Clinton, *A National Security Strategy For A New Century-1997*. pp. 16.

³³ Clinton, *A National Security Strategy For A New Century-1998*. pps. 24-27.

with sanctions in April citing continued destabilizing acts, namely the technology trafficking occurring with Pakistan, the launch of a Taepodong-1 ballistic missile over Japan, and suspected actions of an underground nuclear site near Kumchang-ni.³⁴ The 1998 NSS, published in October and somewhat influenced by these events, took into account the military requirements placed in the 1997 Quadrennial Defense Review (QDR) and maintains an overall focus on trans-national actors and terrorist activities. The national strategy mirrors the 1997 NSS (see **Table 6**) with the exception of the defense agenda. There are three minor changes that place the quality of people first, move information infrastructure from being a separate item to incorporating it under ISR, and adds overseas power projection as a sixth critical military element of national power.

The 1998 NSS emphasizes, “Protecting our citizens and critical infrastructures at home is an intrinsic and essential element of our security strategy where the dividing line between domestic and foreign policy is increasingly blurred.”³⁵ This security challenge, in President Clinton’s vision, could only be accomplished through the application of interagency and consolidated information governed by a holistic approach to incorporating the capabilities of the DOD and the intelligence community writ-large. This same year, the State Department in response to the changing nature of a domestic and foreign conflation of threats, incorporated the United States Information Agency (USIA est. 1953), which consolidated both the means of gathering and disseminating national

³⁴ Jr. J. Boone Bartholomees, "U.S. Relations With North Korea, 1991-2000," in *National Security Policy and Strategy Volume-II 5th Edition*, ed. Jr. J. Boone Bartholomees, *U.S. Army War College Guide to National Security Issues* (Carlisle Barracks, PA: U.S. Army War College Strategic Studies Institute, June 2012), pps. 372-73.

³⁵ Clinton, *A National Security Strategy For A New Century-1998*. pp. 2.

information.³⁶ The “need for an integrated approach” of our DOD, military, and industrial intelligence community would be the key success in countering the asymmetrical threats most likely to strike U.S. security at home and abroad.³⁷ The overall guidance of the October 1998 NSS would hold through the end of the decade, and completes the initial examination of National Security Strategy from 1990 – 1999.

The evolution of NSS from the years 1990-1999 did eventually change in terms of providing prioritized strategy as well as defining the critical military elements of power. However, it must be clear that none of the documents released by the White House indicated a level of priority of any military capability until the release of the 1997 version of the National Security Strategy. As explained, the 1997-1999 NSSs did characterize the critical elements of national power and rank ordered them clearly. In 1997, ISR ranked number 1 and changed to number 2 in the years 1998-1999. In fact, in each version from 1993-1999, the emphasis on a ‘strong national intelligence capability’ made an appearance as either a national focus, critical element of national power, or as a separate function of strategic success. The next evaluation for this period will be a review of National Military Strategy (NMS) followed by a review of Air Force Service Doctrine and priorities (for ISR).

National Military Strategy 1990-1999

The National Military Strategy (NMS) covered in this section contains the guidance issued by the Chairman of the Joint Chiefs of Staff. There may be classified amendments and/or supplemental information that accompany these particular NMS

³⁶ Dennis M. Murphy, "Strategic Communications: Wielding the Information Element of Power," in *Theory of War and Strategy Volume-I 5th Edition*, ed. Jr. J. Boone Bartholomees, *U.S. Army War College Guide to National Security Issues* (Carlisle Barracks, PA: U.S. Army War College Strategic Studies Institute, June 2012), pp. 166.

³⁷ Clinton, *A National Security Strategy For A New Century-1998*. pp. 7.

versions, but are obviously not part of this discussion. The comparison of National Military Strategy from version to version is not entirely linear. Each version made various changes in overall approaches and levels of prescription for the services, however three key elements can be largely held across all five versions: *1) National Military Objectives, 2) Strategic Elements/Desired Attributes, and 3) Capability Focus*. In addition, this research will identify any new critical areas directly supporting the overall themes presented in NSS.

The 1992 NMS, issued by General Colin Powell, is the first unclassified document created by the Office of the Chairman of the Joint Chiefs of Staff (CJCS) that is a direct result of the 1986 Goldwater-Nichols Act (GNA). The GNA, “considered the most significant piece of defense legislation since the National Security Defense Act of 1947 that established the Department of Defense”, is the preemptive act of Congress to better organize the DOD, increase inter-agency cooperation, improve resource utilization, and create a more holistic approach towards to providing of capabilities for national security.³⁸

General Powell begins by reviewing some of the radical changes that contributed to the context of his NMS for the United States. He states, “Our National Military Strategy has been containment of the Soviet Union and its communist ideology. Over the last 3 years, the Berlin wall fell; the Warsaw Pact dissolved; Germany reunified; democracy took hold in Eastern Europe and Latin America, Iraqi aggression was reversed, and the Soviet Union ceased to exist.”³⁹

³⁸ Meinhart, "National Military Strategies: A Historical Perspective 1990 to 2012," pp. 81. Information is as cited in the material and is a paraphrase of information first found in *The Chairmanship of the Joint Chiefs of Staff* by Robert H. Cole p. 30

³⁹ Powell, *The National Military Strategy of the United States - 1992*. from the executive summary.

Table 7 Key Elements of 1992 National Military Strategy

National Military Objectives	Strategic Elements/Desired Attributes	Capability Focus
<p>1. Strategic Deterrence and Defense- a credible deterrence requires a reliable warning system, modern nuclear forces, flexible response, and a defensive system for global protection</p> <p>2. Forward Presence- maintain a credible presence in various locations that maintain access and security to U.S. partners and allies</p> <p>3. Crisis Response-U.S. forces must be able to respond to regional events across the spectrum of conflict and still be prepared should an enemy attempt to take advantage elsewhere</p> <p>4. Reconstitution- preserve the capability to forestall any potential enemy during the time of planned reduction in forces based on the demise of the global threat</p>	<p>1. Readiness- prevent a hollow force, increase joint teamwork, and focus on leadership</p> <p>2. Collective Security- support formal alliances such as NATO, however encourage international participation</p> <p>3. Arms Control- increase predictability through open relationships and mutual cooperation</p> <p>4. Maritime and Aerospace Superiority-maintain ability to control air, sea, and space and ensure the utilization of all lines of communication</p> <p>5. Strategic Agility- force capable of rapid world-wide movement</p> <p>6. Power Projection-ability to project power both CONUS and from forward locations</p> <p>7. Technological Superiority-in peace focus on innovation, in war utilize technology to enhance combat capability</p> <p>8. Decisive Force-ability to rapidly assemble</p>	<p>1. Transportation-U.S. requirement for the four national military objectives requires sufficient strategic mobility to rapidly deploy and sustain operations</p> <p>2. Space- Early warning, ISR, navigation, and C3 hinge 4 tasks:</p> <ol style="list-style-type: none"> Space Control Force Application Force Enhancement Space Support <p>3. Reconstitution- preserve ability to build force after planned drawdown, the success of which depends on adequate strategic ISR</p> <p>4. Research and Development-despite the drawdown, DOD must continue to encourage innovation and advancement</p>

Source: This table adapted from 1992 NMS pages 6-10, and 24-25

General Powell's conclusions, and his direct charge for the services, emphasized joint teamwork and the need for accurate and timely intelligence. This reflected his vision of the radically different world that the NMS must consider and explained the seven major changes pertaining to NMS that must be accounted for: 1) Regional Orientation, 2) Threat of the Uncertain and Unknown, 3) A Smaller Total Force, 4) COCOM's Drive the Planning Process, 5) Adaptive Plans, 6) Strategic Agility, and 7) Decisive Force.⁴⁰ These emphases centered on a more joint and inclusive

⁴⁰ Powell, *The National Military Strategy of the United States - 1992*. pp. 26.

approach to the solution of global problems and the importance of a military force capable across the wider spectrum of conflict.

Through an examination of the 1992 NMS, a comparison of the key elements (see Table 7) pivot on the national ability to gain and maintain global situational awareness through the utilization of the intelligence, surveillance, and reconnaissance community and a clear ability to predict potential threats in time to reconstitute and project nation military capabilities. However, the 1992 NMS failed to highlight the significant importance or place a joint priority on ISR. Despite the 1990 NSS including ISR as a key defense agenda item (for reference see Table 1), and the 1991 NSS stating, “American intelligence capabilities is a unique national asset, crucial not only to our own security, but also to our leadership role in responding to international challenges”, ISR remained critical yet absent from the strategic documents placed forward.⁴¹

The 1995 NMS unveiling entered into a troubled world characterized by widespread regional instability, ongoing conflict in the Balkans and Africa, WMD proliferation after the collapse of the Soviet Union, and the growing threat of terrorist and non-state actors.⁴² This NMS, created by General John Shalikashvili, was the first of two completed during his tenure as CJCS. The 1995 NMS evolved into a document that not only refined the initial guidance set forth by General Powell, but increased the level of detailed guidance towards the long range planning efforts of the United States.

The key elements were slightly more diverse, yet include much more detail, namely the desired attributes and capability focus (see Table 8). Additionally, the NMS added a section that declared a few areas in combat support that required strengthening, one

⁴¹ Bush, *National Security Strategy of The United States-1991*. pp. 16.

⁴² Meinhart, "National Military Strategies: A Historical Perspective 1990 to 2012," pp. 86.

of which was the intelligence capabilities of the military. In fact under *Fight and Win* (see again Table 8), one of the eight key principles is “Win the Information War” and explains how the remarkable leverage gained through ISR allows for an enhancement and domination of warfare and warrants both special attention and assurity that it will be available against any enemy.⁴³

Table 8 Key Elements of 1995 National Military Strategy

<u>National Military Objectives</u>	<u>Strategic Elements /Desired Attributes</u>	<u>Capability Focus</u>
<p>1. Promote Stability – stabilize the conditions that support democracy and create the conditions that maintain order</p> <p>2. Thwart Aggression –utilize American forward presence to assist allies around the world, and remain vigilant against enemies that may seek the advantage when we are committed elsewhere</p>	<p>1. Peacetime Engagement- the broad range of noncombatant activities to promote democracy, relieve suffering, and enhance overall regional stability</p> <p>2. Deterrence and Conflict Prevention- ranges from conflict’s high end represented by nuclear deterrence to conflict’s low end represented by peace enforcement to restore stability, security, and international law</p> <p>3. Fight and Win- the strategy describes the military’s foremost responsibility defined as the ability to fight and win two major regional contingencies</p>	<p>1. Posture and Size- remain capable during the planned drawdown in the dynamic unpredictable post-Cold War: (vital forces that need to be strengthened)</p> <p>a. Transportaion b. Logistics c. Intelligence d. Communications e. Medical Capabilities</p> <p>2. Force Building-</p> <p>a. Quality People b. Readiness c. Enhancements d. Modernization e. Balance</p>

Source: This table adapted from 1995 NMS pages 4-5, and 17-19

The September 1997 National Military Strategy, again conveyed by General Shalikashvili, included comments on the newly released Quadrennial Defense Review (QDR), created through a mandate from Congress and released by the SECDEF, William S. Cohen, in May 1997. The QDR determined that the backbone of military innovation centers on the DOD’s ability to maintain an optimized ISR system that is able

⁴³ Shalikashvili, *The National Military Strategy of the United States of America-1995: A Strategy of Flexible and Selective Engagement*. pp. 15.

to provide warfighters with dominate informational superiority.⁴⁴ The QDR also warned DOD and various acquisition professionals of the dangers in unplanned programs and the impacts of improper resources allocation that deviated from the strategic vision articulated in national security policies.⁴⁵

Table 9 Key Elements of 1997 National Military Strategy

<u>National Military Objectives</u>	<u>Strategic Elements / Desired Attributes</u>	<u>Capability Focus</u>
<p>1. Promote Peace- Pursuit of this objective supports the President's <i>1997 NSS</i> by ensuring that no critical region is dominated by a power hostile to the United States and that regions of greatest importance to the US are stable and at peace.</p> <p>2. Defeat Adversaries- In the event of an attack, the U.S. will use the required amount of decisive force in order to break the enemies will to continue or defeat them</p>	<p>1. Shaping the International Environment</p> <ul style="list-style-type: none"> a. Promoting Stability b. Prevent/Reduce Conflicts and Threats c. Peacetime Deterrence <p>2. Responding to the Full Spectrum of Conflict</p> <ul style="list-style-type: none"> a. Deter Aggression or Coercion in Crisis b. Fighting and Winning MCO c. Conduct Multiple, Concurrent Smaller-Scale Contingency Ops <p>3. Prepare Now for an Uncertain Future</p> <ul style="list-style-type: none"> a. Information Superiority b. Technological Innovation <p>4. Balanced Evolution</p>	<p>1. Strategic Deterrence</p> <p>2. Decisive Operations</p> <p>3. Special Operations</p> <p>4. Forcible Entry</p> <p>5. Force Protection</p> <p>6. Countering WMD</p> <p>7. Focus Logistics</p> <p>8. Information Operations</p> <p>Strategic Enablers</p> <ul style="list-style-type: none"> 1. People 2. All-Source Intel 3. Global Command and Control 4. Air and Sea Control 5. Space Control 6. Strategic Mobility

Source: This table adapted from 1997 NMS pages 11-18, and 24-29

The 1997 NMS followed the NSS and QDR via the “integrated strategic approach embodied by the terms Shape, Respond, and Prepare now.”⁴⁶ The principal strategic environment remained centered on regional dangers, asymmetric challenges, transnational threats, and ‘wild cards’. This NMS also maintained the focus on major

⁴⁴ Secretary of Defense William S. Cohen, Report of the Quadrennial Defense Review-1997, (Washington, DC: Department of Defense, May 1997), <http://www.isn.ethz.ch/isn/Digital-Library/Publications/Detail/?ots783=0c54e3b3-1e9c-be1e-2c24-a6a8c7060233&lng=en&id=32542> (accessed 20 March 2013). pp. 69.

⁴⁵ Cohen, *Report of the Quadrennial Defense Review-1997*. pp. 102.

⁴⁶ Shalikashvili, *The National Military Strategy of the United States of America-1997: Shape, Respond, Prepare Now-A Military Strategy for a New Era*. pp. 4.

combat operations (MCO), while keeping a balance force ready for utilization in multiple small-scale contingency operations. Even the capability focus places strategic deterrence as the number one priority (see Table 9). Additionally the 1997 NSS places intelligence and space control as the number 1 and 2 key elements of national power (see previous Table 6), the national military strategy deems them “enablers critical to the worldwide application of U.S. military power and grand strategy.”⁴⁷ In either case, both documents seem to remain consistent in placing a premium on availability of a globally vigilant ISR system, able to provide warfighters the requisite amount and type of data predicated on the growing partnership of sensor to shooter.

In review, the three National Military Strategies (NMS) of 1992, 1995, and 1997 illustrate a continuous refinement in providing the military services and industry in sync with the strategic guidance interpreted from the National Security Strategy. In each case, the requirement for flexibility and preparedness across the spectrum of conflict remains central in the provision of capabilities. ISR in turn must be able to provide both the strategic and tactical capabilities when considered as a viable option in response to either conflicts or nation security issues. The ability to detect and diagnose the threats, and more importantly provide ample warning, hinges on the U.S. military’s is ability to provide robust and globally available intelligence, surveillance, and reconnaissance. The 1995 NMS utilized the term ‘winning the information war’, while the 1997 NMS termed ISR as a key strategic enabler. Hence, ISR is a significant capability that acts as a foundational underpinning for the success of the NSS through the NMS. The next part of the examination is a dissection of the United States Air Force’s response to 1990 – 1999

⁴⁷ Shalikashvili, *The National Military Strategy of the United States of America-1997: Shape, Respond, Prepare Now-A Military Strategy for a New Era*. pp. 27.

strategic guidance.

The United States Air Force Doctrine and ISR Capabilities/Flight Plan 1990-1999

Thus far, the National Security Strategy and the National Military Strategy have provided grand strategic and strategic guidance for the services. The next phase of evaluation is the continuance of guidance into doctrine, specifically regarding the United States Air Force and the doctrinal priorities and integration of intelligence, surveillance, and reconnaissance capabilities as written into Air Force Doctrine. Three such doctrinal examples are available for examination in the period 1990-1999. Each example is synthesized into three comparative key elements of 1) *Roles and Missions/Core Competencies*, 2) *Tenants*, and 3) *Operational Functions*.

“In March 1992, the service published the *Basic Aerospace Doctrine of the United States Air Force* (AFM 1-1), a document that then chief of staff General Merrill McPeak believed was one of the most important documents published by the Air Force.”⁴⁸ Within AFM 1-1, General McPeak asked that every Airman, especially the noncommissioned and commissioned officers, be fully versed in Volume-I of the release and understand the messages contained within Volume-II as the contents contained “the heart of the profession of arms for airmen.”⁴⁹ The lessons of the 1991 Gulf War serve as an example of near dogmatic adherence to a Cold War mindset and an inability to properly provide airpower consistent with the requirements of senior leaders in search of a political end. The translation is the flexibility to provide ‘airpower’ as requested and

⁴⁸ Dag Henriksen, *NATO's Gamble: Combining Diplomacy and Airpower in the Kosovo Crisis 1998-1999* (Annapolis, MD: Naval Institute Press, 2007). pp. 51.

⁴⁹ USAF, *Air Force Manual 1-1 Basic Aerospace Doctrine of the United States Air Force Vol-I - 1992*, ed. John E. Jordan, Colonel Dennis M. Drew, and approved by Maj Gen Howell M. Estes III, vol. I (Washington, DC: Department of the Air Force, Headquarters US Air Force, March 1992). pp. v. Quote from the forward

required by the theater commanders, that provided the effects needed, without approaching the problem with solution in hand. If the requirements in Kosovo, or any other military action, needed a different capability other than air superiority, could the Air Force deliver? For example, was ISR coequal with other operational functions captured in Air Force doctrine?

“To the airmen approaching Kosovo, the strategic use of airpower in the 1991 Gulf War had shown that rapid escalation and overwhelming force aimed at the enemy’s leadership constituted the preferable way to apply airpower. *It was what they had been taught at air campaign courses at Maxwell Air Force Base* (emphasis added). This approach did not fit the political nature of the Kosovo crisis. The Air Force’s doctrinaire focus on decisive force and high-intensity warfare proved to be an institutionalized hindrance in terms of crafting a strategy based on the political realities of Belgrade . . . As a result the U.S. Air Force was unprepared for the coercive diplomacy it was intended to support.”⁵⁰

The goal of the 1992 AFM 1-1 was to create standards to measure efforts, guide our efforts, gauge success, and illuminate problems through a growing and evolving document capable of integrating former experiences, while constantly evaluating the changing environment dependent on flexible airpower.⁵¹ In terms of priorities, AFM 1-1 Vol-1 states, “*aerospace control* (Counterair, and Counterspace) should be the first priority for aerospace forces”, and goes on to say that, “aggressive defeat of the enemy’s aerospace forces is the airman’s first priority”.⁵² Additionally, AFM 1-1 Vol-2 suggests that *aerospace control* “should normally be a commander’s first campaign priority” as it makes possible the force enhancement aspects of airpower that include ISR, enables the

⁵⁰ Henriksen, *NATO's Gamble: Combining Diplomacy and Airpower in the Kosovo Crisis 1998-1999*: pps. 29-30.

⁵¹ USAF, *Air Force Manual 1-1 Basic Aerospace Doctrine of the United States Air Force Vol-I - 1992*, I: pp. vii.

⁵² USAF, *Air Force Manual 1-1 Basic Aerospace Doctrine of the United States Air Force Vol-I - 1992*, I: pps. 10,16.

additional force application missions, and permits friendly force movement. “In classical military terms, aerospace control magnifies the enemy’s fog and friction while reducing friendly fog and friction.”⁵³

Table 10 Key Elements of 1992 Air Force Doctrine

<u>Roles and Mission/Core Competencies</u>	<u>Tenants</u>	<u>Operational Functions</u>
1. Role - Aerospace Control - assure the friendly use of the environment while denying its use to an enemy Mission - Any mission whose objectives are designed to gain and maintain control of the aerospace environment	1. Centralized Control/ Decentralized Execution	1. Counterair 2. Counterspace 3. Strategic Attack 4. Interdiction 5. Close Air Support
2. Role- Force Application - brings aerospace power to bear directly against surface targets Mission - Any mission that applies combat power against surface targets exclusive of missions in those above	2. Flexibility Versatility	6. Airlift 7. Air Refueling 8. Spacelift
3. Role- Force Enhancement - increases the ability of aerospace and surface forces to perform their missions Mission - Any mission that enables effects of two prior roles	3. Priority 4. Synergy 5. Balance 6. Concentration 7. Persistence	9. Electronic Combat 10. Surveillance and Reconnaissance
4. Force Support - must sustain operations Mission – all forces performing the base operations and logistical sustainment		11. Special Operations 12. Base Operability and Defense 13. Logistics 14. Combat Support 15. On-Orbit Support

Source: This table adapted from 1992 Air Force Doctrine Pages 4-9

However, if the ‘fog’ symbolizes the lack of information or uncertainty of the opponents movement, then actions guided by doctrine must reflect the role of intelligence *pre-aerospace control*. This is not the case in AFM 1-1. Lt Col Robert Boudreau, examined AFM 1-1 in his article *The New AFM 1-1: Shortfall in Doctrine?* He described how the new doctrine, intended to provide a whole approach to airpower, exclusively focuses on combat at the campaign level and relegates airlift, special operations, and electronic combat as force enhancement.⁵⁴ The role of intelligence is described as that which provides targeting data and accurate damage assessment, not the predictive nature

⁵³ USAF, *Air Force Manual 1-1 Basic Aerospace Doctrine of the United States Air Force Vol-II - 1992*, ed. John E. Jordan, Colonel Dennis M. Drew, and approved by Maj Gen Howell M. Estes III, vol. II (Washington, DC: Department of the Air Force, Headquarters US Air Force, March 1992). pp. 136.

⁵⁴ Lt Col Robert N. Boudreau, "The New AFM 1-1: Shortfall in Doctrine?," *Airpower Journal*, no. Winter 92 (1992): pp. 38.

of strategic or tactical intelligence.⁵⁵

The next version of Air Force Basic Doctrine 1 (AF DD-1) arrived in September 1997. The Air Force Doctrine Center (AFDC) and the first version of Air Force Doctrine to be produced outside the direct control of the Air Staff. Approved by Air Force Chief of Staff, Michael E. Ryan, this doctrine signified an evolution in Air Force doctrinal philosophy and clearly articulated the new taxonomy of strategic to tactical guidance currently in use.

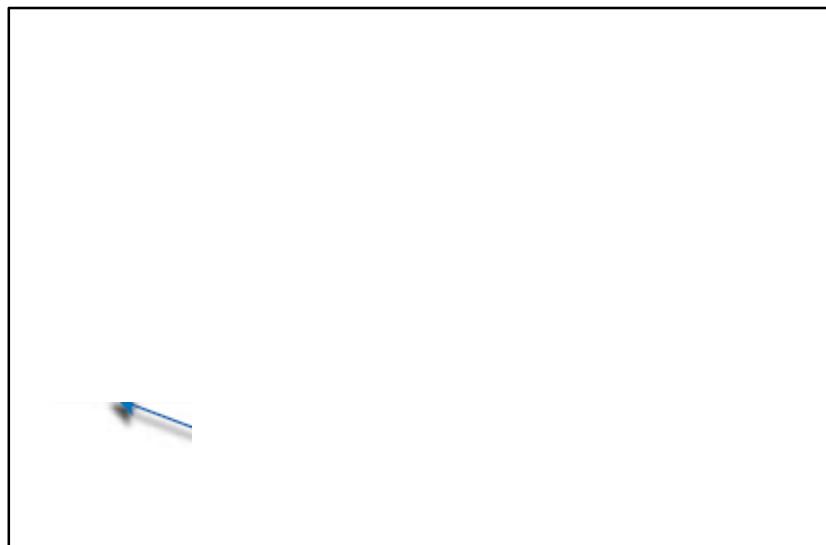


Figure 2 Hierarchy of Air and Space Doctrine Documents
Source: AF DD-1 1997 page 3

AF DD-1 would serve as the Air Force's 'grand strategy' and allow for clear ties to follow on guidance. The three levels (see Figure 2), comprise basic, operational, and tactical doctrine. *Basic doctrine* "contains the most fundamental and enduring beliefs that describe and guide the proper use of air and space forces and provides the broad and continuing guidance on how the Air Force forces are organized and employed." *Operational doctrine* "guides the proper employment of air and space forces in the

⁵⁵ USAF, *Air Force Manual 1-1 Basic Aerospace Doctrine of the United States Air Force Vol-II - 1992*, II: pp. 150.

context of distinct objectives, force capabilities, broad functional areas, and operational environments. *Tactical doctrine* “describes the proper employment of specific weapon systems individually or in concert with other weapon systems to accomplish detailed objectives” which will be captured in Air Force Tactics, Techniques, and Procedures (AFTTP) 3-series manuals.⁵⁶ A more important change critical in the evaluation of the various versions of Air Force Doctrine is the substantive change from guiding *roles and missions* to *core competencies*.

As a comparison, the 1997 National Security Strategy names ISR as a prioritized *critical element of national security* (see Table 6) and describes the ability to maintain a high level of awareness and warning as crucial during periods of reconstitution and regional instability. However, Air Force doctrine (Table 11) clearly prioritizes *counterair, counterspace*, and places ISR further down the list in 12-14th place. This fails to take into account both the globally utilized mission of ISR that occurs in peace and wartime, as well as the need to understand the enemy and provide his capabilities prior to engagement.

Oddly, AF DD-1 uses Pearl Harbor as an example of the power of air when decisive employment of assets are utilized against both sea and land targets. This example, however, should illustrate that the Japanese were successful because of extensive aerial reconnaissance and targeting before the event took place, and the failure was in the U.S. inability to provide accurate and ample warning to provide for a credible defense

⁵⁶ USAF, *Air Force Basic Doctrine: Air Force Doctrine Document-1 - 1997*: pps. 2-3. This covers all three definitions of basic, operational, and tactical doctrine as one citation.

Table 11 Key Elements of 1997 Air Force Doctrine

<u>Roles and Missions/Core Competencies</u>	<u>Tenets</u>	<u>Operational Functions</u>
1. Air and Space Superiority 2. Precision Engagement 3. Information Superiority 4. Global Attack 5. Rapid Global Mobility 6. Agile Combat Support	1. Centralized Control and Decentralized Execution 2. Flexibility and Versatility 3. Synergistic Effects 4. Persistence 5. Concentration 6. Priority 7. Balance	1. Counterair 2. Counterspace 3. Counterland 4. Countersea 5. Strategic Attack 6. Counterinformation 7. Command and Control 8. Airlift 9. Air Refueling 10. Spacelift 11. Special Operations Employment 12. Intelligence 13. Surveillance 14. Reconnaissance 15. Combat Search and Rescue 16. Navigation and Positioning 17. Weather Services

Source: This table adapted from 1997 Air Force DD-1 pages 23-27, 29-34, and 46-60

For this portion of the examination (1990-1999), the Air Force produced only one unified approach to intelligence, surveillance and reconnaissance in the form of AF DD-2-5.2 published in April 1999. Major General Timothy A. Kinnan, Commander of the Air Force Doctrine Center, provides a somewhat revolutionary approach to the services stance on ISR. He states, “Integrated ISR assets and resources directly support the Air Force’s ability to provide global awareness throughout the range of military operations and contribute to our commanders’ comprehensive view of the battlefield.”⁵⁷

Intelligence Preparation of the Battlespace (IPB) is the phrase contained in AF DD-2 that defines the Air Forces utilization of ISR for the “systematic, continuous process of analyzing the threat and environment to help the commander better understand the battlespace” and an “effective analytical process used in peacetime, crisis, or at the tactical, operational, and strategic levels of war.”⁵⁸ Here, finally, is an approach that

⁵⁷ USAF, *Intelligence, Surveillance, and Reconnaissance Operations: Air Force Doctrine Document 2-5.2-1999*: pp. ii.

⁵⁸ USAF, *Intelligence, Surveillance, and Reconnaissance Operations: Air Force Doctrine Document 2-5.2-1999*: pps. 40-41.

describes the range of ISR requirements that illustrate its nature outside the confines of just conflict. IPB included the pre-strike assessment of an area, post-strike battle damage assessment and the post-conflict monitoring of the ensuing peace. Assets like the U-2 and Rivet Joint, are capable of the ISR required for the intent of IPB at the strategic and operational levels of war but fall short in the need for more refined information closer to the actual occupants of the battlefield. However, tactical level ISR is consigned as a function of NT-ISR aircraft cockpit videos at the wing and squadron level, which failed to offer a cohesive approach for providing actionable or globally available intelligence to those who would benefit from the IPB process. True platforms and crews trained and credentialed to perform the missions required to directly support the ground element, with aircraft designed for the complex environment of tactical operations were not part of the discussion, an essential conversation that would be forced later in 2008 through the ISR Task Force. Bottomline: no clear strategy to support the changing face of ISR requirements, either in support of national security or of providing a layered approach to ISR, could be determined through the evaluation of Air Force Doctrine that adequately illustrates a tie to either the NSS or NMS. For now, the priorities for the Air Force were counter-air centric and still in a Cold War force-on-force mindset.

What ISR Did the Air Force Provide - 1990-1999?

The difficulty in the comparison of historical application of airpower, or any other means of military power for that matter, is the establishment of impacts. The United States has continued to be a free nation and national security was sufficient in terms of providing for the safe day-to-day living for Americans. However, did the Air Force have

a solid approach to the provision of ISR capability that took into account the demands placed upon it by the NSS?

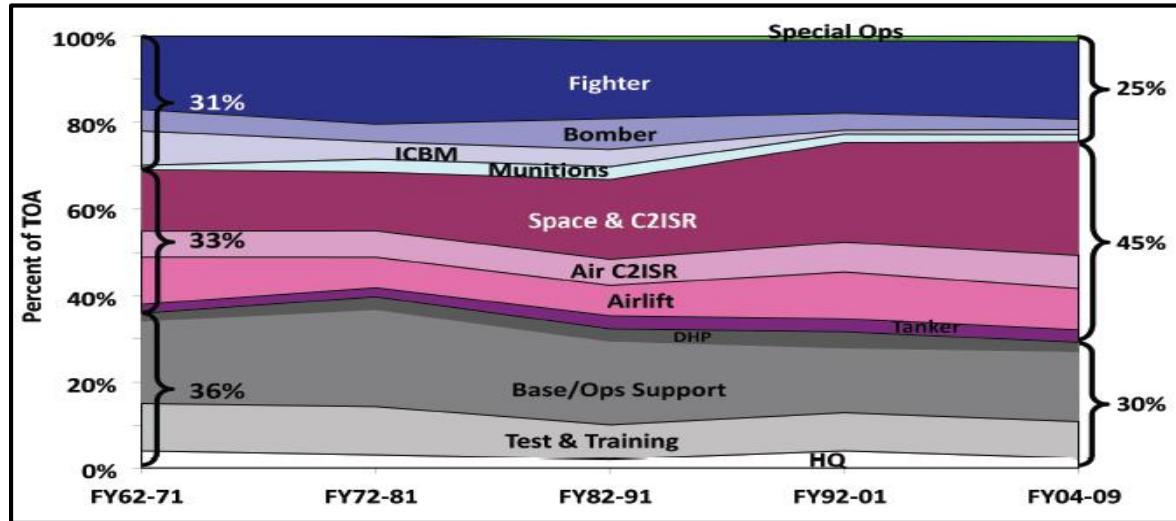


Figure 3 USAF Budget Allocation by MDS from FY 62 - FY 09
 Source: Graphic utilized from *Arsenal of Airpower* by Col James Ruehrmund page-4

A study by the Billy Mitchell Institute took a 60-year look at aircraft force structure, spending, and mission design series (MDS) that provides a source of comparing the articulated needs of national security with the response by the service. The very first illustration shows a fundamental flaw in the way information is presented to decision makers, and how programmers and strategists could misidentify adequacy when taking into account the level of ISR provided as a function of overall total obligation authority (TOA). This issue stems from the accounting of MDSs (Fighters, Bomber, ICBM, etc.). Here, ‘Space’, ‘C2’, and ISR are considered a singular expenditure line. By doing so, the costs associated with each MDS becomes a collective line of accounting thus masking the true picture for procurement of ISR specific systems. For instance, the report states:

... the service’s spending on joint force support—space, mobility, and intelligence-surveillance-reconnaissance (ISR) capabilities—grew almost 40 percent after 1962 and consumed about 45 percent of the budget in the past decade. The dominant trend in this area is the steady growth in space system funding. The data shows that, when combining overhead and joint force

enablers, only 25 percent remains for combat forces. In other words, if the Air Force retired its entire fighter, bomber, and intercontinental ballistic missile (ICBM) force, its spending would only decline 25 percent.⁵⁹

This is not representative of true ISR capability owned. The assessment wrongly adds the cost of space systems without a methodology to break apart the constituent elements and provide senior leaders the correct assessment of spending. Figure 3 is a graphic illustration of this point. The figure breaks each MDS as a function of TOA by fiscal year groups. The initial comparison may seem to show an equal level of capability, or at least spending, unless compared with a break out by actual physical assets owned. The next figure shows that very level of detail.

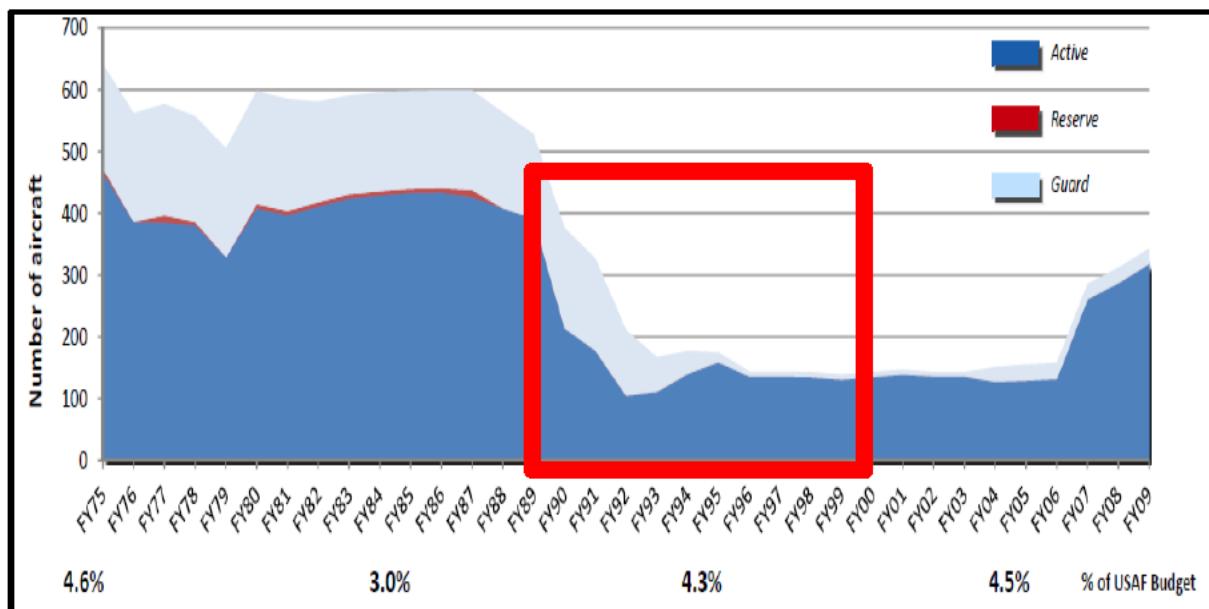


Figure 4 Trends in USAF Airborne ISR FY75 - FY09 - Focus FY90 - FY99

Source: Graphic from Billy Mitchell Institute Brief-

http://www.afa.org/Mitchell/presentations/011712_MP8_ISR_slides.pdf page 4

If ISR aircraft are separated, then a clearer picture emerges that illustrates the true level of physical ownership by the service. Figure 4 unmistakably shows a cliff

⁵⁹ Ruehrmund and Bowie, *Arsenal of Airpower: USAF Aircraft Inventory*: pp. 4.

beginning in FY90 and continuing through FY99. Thus, despite the articulation of equal spending on the previous chart, the true percent of budget for airborne ISR only averaged 4.3% compared to say the nearly 20% for fighters. Additionally, for this year group, a complete breakdown of total aircraft owned as a percentage of the fleet shows the emphasis on a very specific mission set. Both the NSS and NMS consistently express the requirement for dealing with regional conflicts, and both the 1997 and 1998 NSS deemed ISR as a critical military element of national power (see Table 6), but the Air Force presented a different force mix.

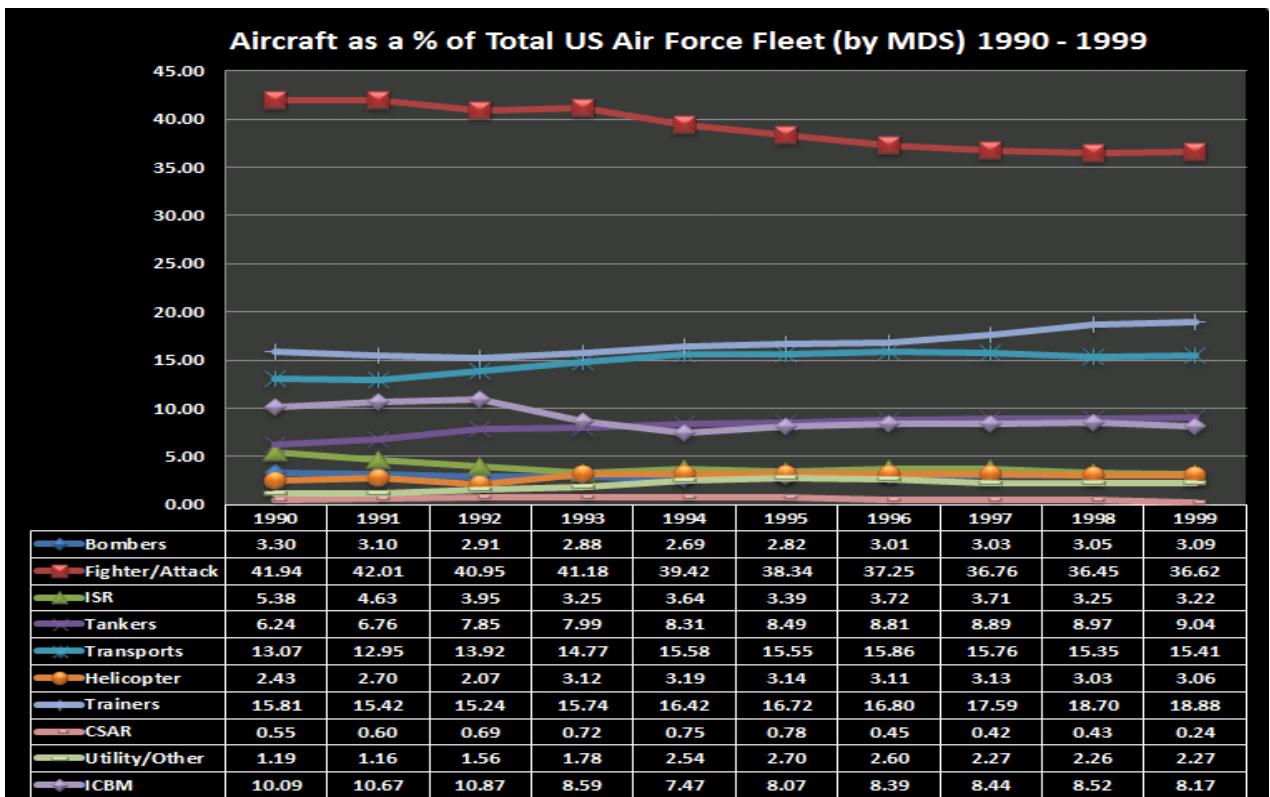


Figure 5 Aircraft Comparison (by MDS) as a Percentage of Total USAF Fleet 1990 – 1999
 Source: This is the authors' own compilation of raw data from *Arsenal of Airpower pages*

23-24

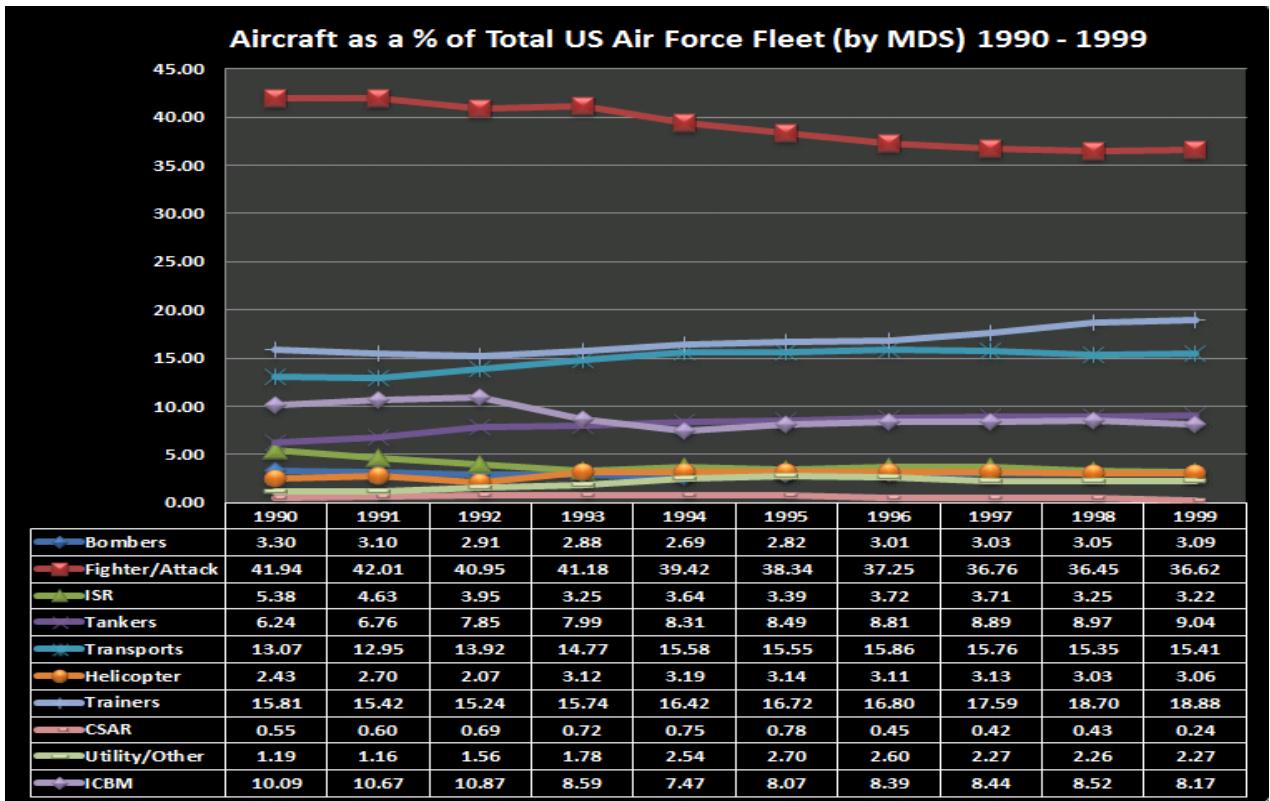


Figure 5 Figure 5 is the author's breakdown, by MDS, of the entire Air Force

inventory as a percentage of the total fleet. As the Cold War closed, a force structure initially designed to handle a large force-on-force major combat operation seems logical. However, the clear evidence here shows that fighter/attack aircraft dominated the fleet by a substantial margin. The trend of maintaining a fighter/attack force that alone averaged approximately 39% of the force, may have translated into very limited ISR capabilities. Especially when another deficit in ISR capability is introduced in the realm of tactical level ISR.

The OV-10 and RF-4 were the only two operating platforms designated as purpose built tactical level ISR aircraft in the US Air Force fleet. However, both were retired between FY90 and FY95 without any replacements added into the inventory. In fact, the next closest possibility was the addition of six total MQ-1's by the end of

FY99.⁶⁰ Again, the Air Force response in providing options for ISR failed to meet the requirements placed forth by both the NSS and NMS in this era. This shortfall was captured in the QDR issued in 1997.

One QDR exists in the time period of 1990-1999 and was released in May 1997 by Secretary of Defense William S. Cohen. This particular QDR is the first of its kind as required by the National Defense Act of 1997, which directs the CJCS provide an independent assessment to the SECDEF.⁶¹ The process of the QDR uncovered various strengths and weakness throughout the DOD, but also emphasized the need to provide a measure of national security prior to the beginning of conflict. In other words, the utilization of intelligence gathering systems and capabilities would both provide a measure of vigilance of prospective enemies as well as give warning of impending hostile actions. However, these areas of relative dominance would not remain so without modernization.

Areas in which the United States has a significant advantage over potential opponents and increasing capabilities (e.g., space-based assets; command, control, communications, and computers; and intelligence, surveillance, and reconnaissance) could also involve inherent vulnerabilities that could be exploited by potential opponents should we fail to account for such challenges. Dealing with such asymmetric challenges must be an important element of U.S. defense strategy, from fielding new capabilities to adapting how U.S. forces will operate in future contingencies.⁶²

The 1997 QDR also lists four main areas related to the preparation of an uncertain future. First, is pursuing a focused modernization effort to replace aging systems. Second is to exploit the revolution in military to meet both near and far challenges. Third, is to reengineer DOD infrastructure and support activities. Lastly, is to create an

⁶⁰ Ruehrmund and Bowie, *Arsenal of Airpower: USAF Aircraft Inventory*: pp. 45-47.

⁶¹ Cohen, *Report of the Quadrennial Defense Review-1997*. pp. 104.

⁶² Cohen, *Report of the Quadrennial Defense Review-1997*. pp. 21.

insurance hedge against future and emerging threats.⁶³ Each of these areas hinges on pursuing and prioritizing “intelligence capabilities for long-term strategic indications and warnings, designing a process for validating such insurance requirements across the DOD, and developing an insurance program profile and process that can be integrated into overall acquisition processes.”⁶⁴ This is the same admonishment issued by the GAO reports utilized at the beginning of this examination. The importance of this connection illustrates a trend in the services’ aversion to approaching the requirements of national security, in the context of airpower, without a prescribed solution in hand.

SUMMARY 1990-1999

Many significant events transpired in the nine years covered by this study. Desert Storm, Kosovo, numerous humanitarian responses, the fall of the Soviet Union, and the rise of trans-national actors. National Security Strategy fluctuations in this section are the greatest seen in the three periods examined. The 1997 NSS proves to be the most cohesive and in-depth example and outlines a focus on both regional actors and major combat operations highlighting the range of military operations facing the military. Additionally, three critical elements of national power, ISR, Space, and Missile Defense are identified. The 1998-1999 NSSs follow the same calculations. The NMS concentrates on strategic deterrence and decisive operations and considers all intelligence as an enabler rather than a critical element of national power. Yet, it still maintains the essential nature of ISR as part of the worldwide application of U.S. military power. AF DD-1 focuses on the contribution of airpower from the perspective of conflict commencement and the application of counterair forces towards the campaigns

⁶³ Cohen, *Report of the Quadrennial Defense Review-1997*. pp. 35.

⁶⁴ Cohen, *Report of the Quadrennial Defense Review-1997*. pp. 38.

objectives. The priority is not that of providing the key IPB prior to engagement or even post conflict, nor does AF DD-1 include the urgency of providing constant situational awareness to commanders. AF DD-2 more closely resembles a joint warfighter approach to airpower but still leaves out any discussion of a layered approach to ISR that includes strategic and operational level platforms as well as tactical level assets tailored for the flexible nature of close-in tactical warfare.

After the events in Kosovo, the CJCS Staff initiated the Joint Monthly Readiness Review (JMRR). This process assesses the military's readiness to fulfill the requirements of the National Military Strategy, and by extension the National Security Strategy.⁶⁵ In this case, the JMRR covered the April to June 1999 timeframe and tested the Air Force's ability to deal with the small war and potential to shift to a major theater engagement if required. The review concluded that the Air Force was deficient in three areas: mobility, logistics, and ISR.⁶⁶

Both of the versions of Air Force Doctrine equally overlook the need to provide information to planners and campaign leadership through a pre-conflict employment of ISR, or even a need to maintain a vigilant watch over certain areas where air superiority may not be a political option. For example, the utility of a system like the U-2 operating off the coast of Iran or even China depends on the organic capabilities of that system to operate in international waters and not because of a well-organized escort package assigned to its daily operations. To an ISR professional, this is routine operations, for national strategic level concerns, the information is vital, yet the service fails to articulate

⁶⁵ James F. Holcomb, "Managing Strategic Risk," in *National Security and Strategy 2nd Edition*, ed. Jr. J. Boone Bartholomees, *U.S. Army War College Guide to National Security Policy and Strategy* (Carlisle Barracks, PA: U.S. Army War College Strategic Studies Institute, June 2006), pp. 150.

⁶⁶ Holcomb, "Managing Strategic Risk," pp. 151.

this into doctrine. In terms of, procurements, no new systems are placed forward to combat potentially greater areas of denied access or of the increasingly difficulty in locating systems utilizing evolving camouflage and sensor avoiding technology.

Chapter 3

National Security, Military Strategy, and Air Force Doctrine 2000-2009

Intelligence systems must allow commanders to understand enemy intent, predict threat actions, and detect adversary movements, providing them the time necessary to take preventive measures. Our intelligence systems must help provide a more thorough understanding of adversaries' motivations, goals and organizations to determine effective deterrent courses of action.

Quote from 2004 NMS

Intelligence—and how we use it—is our first line of defense against terrorists and the threat posed by hostile states.

President George W. Bush
2002 National Security Strategy

The United States, emerging as the victor of the Cold War, would continue to face dangerous threats to national security. A danger more tangible than the dark ages of the nuclear standoff with the Soviets, and enacted by individuals unhindered by the deterrent rules of conventional war. In February 1993, the World Trade Center was rocked by a homemade bomb constructed by radical Islamists. In October 2000, the USS Cole endured a deadly attack by terrorists using a small fishing boat loaded with explosives. However, the single dominating experience that has guided our national security actions to the present day occurred in 2001. Ironically, Joint Publication 3-0 released on 10 September 2001 and illustrated the rising threat of non-state actors as challengers to national security. However, the assumptions were that these regional challenges would take place in areas such as Iraq, Iran, Africa, or Latin America. No priority was given for providing a cohesive approach sustaining a vigilant watch on potential foes. A day later that would all change.

National Security Strategy 2000-2009

The 2000 National Security Strategy, actually released in December 1999, is the last of the *Strategy For A New Century* series. President Clinton explained the role of the United States as one that “remains the world’s most powerful force for peace, prosperity and the universal values of democracy and freedom.”¹ The overall document remains consistent with that of 1998-1999 with one a minor addition to the broad national objectives, the addition of human rights as a focus.

One of the key elements (see Table 12) is the additional focus placed on defending the homeland in terms of domestic preparedness and critical infrastructure protection. This item, and throughout the 2000 NSS, are consistently labeled as ‘key’, ‘critical’, or ‘priority’. Also, President Clinton, through this document, wrote, “for the first time, law enforcement, intelligence agencies and the private sector will share information about cyber-threats, vulnerabilities, and attacks.”² This interagency charter asks for cooperation within the intelligence community and a plea for linking the capabilities once held behind the parochial bureaucratic curtains.

Another of the key elements that is critical in the examination of grand strategy and Air Force ISR capability management is the focus on smaller-scale contingencies (see Table 12) over that of major theater war. The 2000 NSS placed a premium on the ability for military capabilities to have focused training and relevance in an environment outside of a major theater war. The concept is underpinned not by currently owned systems that might be able to be partially flexible, but by systems that provide the required level of performance through credentialed and trained warfighters designed for

¹ President William J. Clinton, A National Security Strategy For A New Century, (Washington, DC: The White House, December 1999), <http://nssarchive.us/NSSR/2000.pdf> (accessed 9 Dec 2013). pp. iii.

² Clinton, *A National Security Strategy For A New Century*. pp. 18.

the asymmetric and rapidly changing face of small-scale wars, including urban warfare and cross-population insurgencies.

Table 12 Key Elements of 2000 and 2001 National Security Strategy

Broad National Objectives	Regional Challenges and Responses	Defense Agenda
<p>1. To Enhance America's Security</p> <p>2. To Bolster America's Economic Prosperity</p> <p>3. To Promote Democracy and Human Rights Abroad</p>	<p>1. Europe and Eurasia- this area remains vital to U.S. interests and a key ally in the global security game</p> <p>2. East Asia and the Pacific – globalization in the economic markets has linked the major contributors of Japan and China with U.S. growth. Continued growth through open relations with a prosperous People's Republic of China is a priority</p> <p>3. The Western Hemisphere- organized crime, narcotics trade, illegal gun sales, and immigration must be examined with our closest threats and allies</p> <p>4. The Middle East, North Africa, Southwest and South Asia- support the new Prime Minister Barack (Israel) and President Assad (Syria) peace negotiations. Continue to monitor the Middle East's greatest threat, Saddam Hussein.</p> <p>5. Sub-Saharan Africa- support the post-colonial transformation now underway</p>	<p>1. Respond to Threats and Crisis</p> <ol style="list-style-type: none"> Transnational Threats (terrorism, drug trafficking, international crime, illegal trade in WMD materials) <p>2. Defending the Homeland</p> <ol style="list-style-type: none"> National Missile Defense Countering Foreign Intel Collection Domestic Preparedness Against WMD Critical Infrastructure Protection National Security Preparedness <p>3. Smaller-Scale Contingencies – <i>U.S. military must be equipped and prepared to deal with small-scale contingencies across the range of military operations short of major war.</i> (emphasis added)</p> <p>4. Major Theater War</p> <ol style="list-style-type: none"> First -Rapidly defeat initial enemy advances in two theaters Second- Prepare against asymmetric warfare Third- easily transition from global engagement and peace operations to full war footing

Source: This table adapted from 200-2001 NSS pages 3, 14-19, and 29-47

The last major change lies under the title 'Preparing for an Uncertain Future' and lists five critical elements of national power that must be adapted to meet the changing world, affected by globalization and non-state actor growth. Those elements are diplomatic capacity, defense, intelligence, law enforcement, and economic power. For the military, this equates to the need to continue the transformation of capabilities that position U.S. forces to better respond to an uncertain world. For ISR, this means that various strategic to tactical level operations may require adaptive platforms that can feed national level decisions as a function of U.S. national power. Under the guidance of

Joint Forces Command, the required military transformation must part with the continuous Cold War mentality of presenting forces and focus on changes to doctrine, technology, and operational and organizational innovations that provide greater flexibility.³ Thus, the services must be able to break from dogmatic conceptions of how forces should be presented and move towards the capabilities that are requested by the requirements codified in national level strategy.

The 2001 National Security Strategy, published in December 2000, is the last strategic guidance by President Clinton and was issued a month prior to the inauguration of the 43rd President, George W. Bush. This document remains consistent with the 2000 NSS and keeps the same broad national objectives. However, the focus on enhancing security at home and abroad places a premium on the ability to detect and gain predictive intelligence on the actions of potential enemies, and underpins the U.S. ability to preemptively shape the security environment.

The U.S. intelligence community provides various Federal agencies with critical support for the full range of our involvement abroad. Comprehensive collection and analytic capabilities are needed to provide warning of threats to U.S. national security, give analytical support to the policy, law enforcement, and military communities, enable near-real time intelligence while retaining global perspective, identify opportunities for advancing our national interests, and maintain our information advantage in the international arena. We place the highest priority on monitoring the most serious threats to U.S. security.⁴

In addition to this call for a cohesive approach in gathering and disseminating intelligence products, the 2001 NSS also pledges to continue to advance the military's ability to provide improved accuracy and responsiveness of intelligence support to

³ Clinton, *A National Security Strategy For A New Century*. pps. 20-21.

⁴ President William J. Clinton, *A National Security Strategy For A Global Age-2001*, (Washington, DC: The White House, December 2000), <http://nssarchive.us/NSSR/2001.pdf> (accessed 9 Dec 2012). pp. 12.

COCOM commanders, which will also improve the ability to deter terrorism.⁵ The guidance is clear to this point. Since the 1997 NSS, every strategic document to this date stressed the importance of intelligence in monitoring the wide range of potential threats to national security and the military's role in providing the requisite capabilities to fulfill that role.

The paradigm of U.S national security changed dramatically on 11 September 2001. In office for a mere seven months, President Bush now faced the event that shaped his entire presidency. Despite the years of building a force that deterred state actors and organized governments, the strategy would fail in deterring the radical beliefs of fanatic non-state actors. Al Qaeda and the Taliban would now become part of the American strategic lexicon.

The September 2002 National Security Strategy is the first such document created in a wartime environment. This NSS accepted the impact of globalization, took into account the paradigmatic shift caused by the events of 9/11, and refined the impacts of terrorist distributed fear into the equation for survival of the United States way of life.⁶ Enemies no longer required large armies or stockpiles of weapons to inflict harm, small organizations with the will and patience to exploit asymmetric opportunities had proven that America could be wounded. To defeat the threat, a combined approach utilizing military power, and intelligence assets designed for this war on an amorphous threat, must be developed.⁷

The 2002 NSS does vary from the previous versions of national strategy by revising the methodology for achieving broad national objectives, and clear focus on

⁵ Clinton, *A National Security Strategy For A Global Age-2001*. pp. 22.

⁶ Wormley, *Steady Security: Consistency in National Security Strategy Ends*. pp. 28.

⁷ Bush, *The National Security Strategy of The United States-2002*. from the opening statement.

America's intent to be more proactive in the international security game. The key elements utilized throughout this examination can be distilled from the 2002 NSS in order to provide consistency in the comparison from year to year, and the subsequent translation through National Military Strategy and the Air Force's response.

Table 13 Key Elements of 2002 and 2006 National Security Strategy - (*Added in 2006 Only)

<u>Broad National Objectives</u>	<u>Regional Challenges and Responses</u>	<u>Defense Agenda</u>
<p>New Strategic Aims</p> <p>A. Champion Aspirations for Human Dignity B. Strengthen Alliances to Defeat Global Terrorism and Work to Prevent Attacks Against Us and Our Friends C. Work with others to Defuse Regional Conflicts D. Prevent Our Enemies from Threatening Us, Our Allies, and Our Friends with Weapons of Mass Destruction E. Ignite a New Era of Global Economic Growth through Free Markets and Free Trade F. Expand the Circle of Development by Opening Societies and Building the Infrastructure of Democracy G. Develop Agendas for Cooperative Action with the Other Main Centers of Global Power H. Transform America's National Security Institutions to Meet the Challenges and Opportunities of the Twenty-First Century I. <i>*Engage the Opportunities and Confront the Challenges of Globalization</i></p>	<p>1. Israel-Palestinian Conflict 2. South Asian focus on India and Pakistan relations 3. Support Indonesian Democratic Movement 4. Support Latin American Fight Against Drugs and Terrorism 5. Fight African Poverty and encourage successful internal states to provide assistance to the continent</p> <p>*Additional Guidance* and 3 Levels of Engagement</p> <p>1. Conflict Prevention and Resolution 2. Conflict Intervention 3. Post-Conflict Stabilization and Reconstruction</p>	<p>1. Assure Our Friends and Allies 2. Dissuade Future Military Competition 3. Deter Threats Against U.S. Interests, Allies, and Friends 4. Decisively Defeat Any Adversary if Deterrence Fails</p> <p>Guidance For Transformation</p> <p>➤ The military structure to deter massive Cold War-era armies must be transformed to focus on how an adversary might fight rather than where and when a war might occur</p> <p>➤ Create an armed forces portfolio that embodies new approaches to warfare, exploits an intelligence advantage, and provide long range/remote sensing capabilities</p> <p>➤ In the fight against terrorism, the goal must be to provide the President with a wider range of military options</p> <p>➤ Intelligence is our first line of defense against terrorists and the threat posed by hostile states</p>

Source: This table adapted from 2002 NSS pages 1-3, 9-13 and 2006 NSS pages 1, 15, and 44-47

Like the 1997 NSS, the 2002 NSS is a watershed document that not only departs from the previously examined versions, but issues direct guidance to all the services regarding the need for a military-wide transformation (see Table 13). Although the broad national objectives remains consistent with the previous years, the events of 9/11 placed a

premium on the defense of American domestic soil and not just that of overseas national interests.

The defense agenda become more general but provides the markers to guide downstream strategy and doctrine. However, the table's most illuminating aspects are the guidance shifting to clearly demand the transformation of the military away from the continued Cold War structure, and embrace the new non-conventional way of warfare, provide wider options to the President, and to place a premium on intelligence as the first line of defense (see again Table 13).

The 2006 NSS is the next version offered by President Bush and maintains the same wartime contextual tone as the 2002 NSS. The differences (annotated in Table 13) are minor except for the additional guidance regarding U.S. intervention in regional issues. The change is significant because it signals a continuous presence in the area operations prior to and well after main force hostilities. This mission, ideally suited for surveillance and reconnaissance, would depend on both space-based assets as well as highly capable strategic ISR assets, like the U-2 and Global Hawk. Although not directly mentioned by platform, the NSS request to maintain a vigilant line of defense required persistence, flexibility, and the capability to see targets at various ranges. If other nationally owned means are not available, then a military capability through the air may be the next best solution. These assets, presented to President and COCOM commanders the flexibility to task air-breathing assets repeatedly within theater, assets which are not subject to the constraints of satellite orbital mechanics. This flexibility, also requested in both 2002 and 2006 NNS documents (see Table 13), also allows for minimal footprint capabilities. The single-seat and unmanned platforms would be preferable over multi-

person crews and larger airframes. However, if a tactical platform was needed, did the Air Force answer sufficiently and proactively?

National Military Strategy 2000-2009

There is only one version of the National Military Strategy that was published during this time-period. The single version, released in 2004, provided the only strategic guidance issued in the typical NMS form. However, in order to provide a more robust comparison of linkage between high and mid-level guidance, several other documents are examined to provide additional data points of reference. This will include Joint Publication 3-0, Joint Vision 2010 and Joint Vision 2020, and NMS 2004. To provide consistency, the key elements will remain: 1) National Military Objectives, 2) Strategic Elements/Desired Attributes, and 3) Capability Focus.

Joint Publication 3-0 (JP 3-0), ironically released on 10 September 2001, provided guidance to the military services on the Joint focus towards national security. However, an examination of the document illustrates the same outward considerations in terms of threats to national security that ultimately left the front door open to Al Qaeda operatives on 9/11. This is not to say that the blame rests on the failure of the Joint Staff. Nor could they have possibly been able to cover all of the potential scenarios that could have allowed an asymmetric advantage to present itself. This is simply an extension of the need for a range of options in terms of intelligence gathering operations that may help maintain a cohesive picture for national security decision makers. The range of military operations described in JP 3-0 require that intelligence assets, critical in the decision making process for all combat commanders, must be able to operate at all levels of war

from strategic to tactical.⁸ This layered approach to the providing of assets supports the Joint Force Commanders (JFCs) with the intelligence products necessary to gain and maintain battlefield and AOR-level situational awareness.⁹ In fact, the vision of JP 3-0 relating to operations in war provides a few key considerations before combat. First is preparation of the theater, which is defined as the actions the Joint Force commander must enact, and includes intelligence gathering assets at the strategic (before the war for order of battle), operational (supporting movement and feedback of missions), and tactical (special operation actions and other dynamic events) levels.¹⁰

Figure 6 below illustrates the range of military operations (ROMO) that encompasses conventional war to operations other than war. The requirement is that the services are able to provide platforms, capabilities, and trained personnel able to proficiently address this range. Maintaining forces that are designed on the war that might come and not of the conflict that will come, as stated in the 2001 NSS, will leave the JFC lacking in capability.



Figure 6 Range of Military Operations Described in JP 3-0 (2001)
Source: Image utilized from JP 3-0 2001 page I-2

⁸ General Henry H. Shelton, Joint Publication 3-0 Doctrine for Joint Operations- 2001, (Washington, DC: Office of the Chairman of the Joint Chiefs of Staff, September 2001), http://www.fas.org/irss/doctrine/genesis_and_evolution/source_materials/dod_joint_ops_doctrine.pdf (accessed 8 November 2012). pp. II-2.

⁹ Shelton, *Joint Publication 3-0 Doctrine for Joint Operations- 2001*. pp. II-13.

¹⁰ Shelton, *Joint Publication 3-0 Doctrine for Joint Operations- 2001*. pps. IV-1, IV-3.

Joint Vision 2010, although written in 1996, is an excellent comparative marker to determine any progression from the original predictions and the military's adjustment since JV 2010's publication. The document took into consideration an environment driven by post-Cold War regional conflicts, as well as the influence of previous NSS that require the services to remain agile enough to fight in both major wars and smaller-regionally focus conflicts. CJCS General Shalikashvili, through JV 2010, envisioned four operational concepts required to answer the changing face of warfare in the 20th century . . . a “vision of future warfighting that embodies improved intelligence and command and control in the information age.”¹¹ The prediction made 5 years before the events of 9/11 is that *information superiority* will provide the requisite responsiveness required in a world of increased friction and fog.

The emerging operational concepts of dominant maneuver, precision engagement, focused logistics, and full-dimension protection can only be successful when built on the “framework found in improved C2 and intelligence” built for success across the ROMO.¹² JV 2010 also placed a concept forward that provides a quasi-end-state for follow on military strategy, policy, and guidance. The ability to rule the full range of military operations as well as the domains of air, sea, land, and space, are all part of JV2010’s ideal of *Full Spectrum Dominance*.¹³ In order to reach this, a level of dominant battlespace awareness must be reached that provides accurate assessments of friendly and enemy operations, decreased response time, and will help peer through the fog of war via enhanced intelligence, surveillance and reconnaissance systems.¹⁴

¹¹ General John M. Shalikashvili, "Joint Vision 2010," ed. Director of Strategic Plans and Policy J-5 (Washington, DC: US Government Printing Office, 1996), pp. 1.

¹² Shalikashvili, "Joint Vision 2010," pp. 19.

¹³ Shalikashvili, "Joint Vision 2010," pp. 25.

¹⁴ Shalikashvili, "Joint Vision 2010," pp. 13.

Joint Vision 2020 builds upon the conceptual framework of JV 2010. Released in May 2000, JV 2020 places the same primacy on information superiority across the range of military operations and at all levels of war. The focus and importance of removal of a Cold War mentality is captured in this following passage:

The overarching focus of this vision is full spectrum dominance. Attaining that goal requires the steady infusion of new technology and modernization and replacement of equipment. Of greater importance is the development of doctrine, organizations, training and education, leaders, and people that effectively take advantage of the technology. This evolution is strongly influenced by the continued development and proliferation of information technologies that substantially change the conduct of military operations. These changes in the information environment make information superiority a key enabler.¹⁵

JV 2020 also calls for a renewed understanding of the strategic context that a post-Cold War created. The regional conflicts illustrated in this NSS accurately reflect the dynamic environment created by non-state actors and other powerful ideological groups. In order to achieve information dominance, a paradigm shift within the service and DOD must occur. JV 2020, like its predecessor, lays out four distinct variables. First, joint force commander's must embrace the multidimensional nature of ISR that includes assets that enable targeting, or even have the organic capability to target and engage. Second, information operations (IO) must be capable and designed to operate in the tactical, operational, and strategic levels or in combination. Third, understand the IO objective that entails information, perception management, and battlefield situational awareness. Finally, IO occurs in peace, crisis and conflict, which drives the need for options at all phases of an operation.¹⁶

¹⁵ General Henry H. Shelton, "Joint Vision 2020," ed. Director of Strategic Plans and Policy J-5 (Washington, DC: The Office of the Chairman of the Joint Chiefs of Staff, May 2000), pp. 3.

¹⁶ Shelton, "Joint Vision 2020," pp. 29.

JV 2010 and JV 2020, written in 1996 and 2000 respectively, both created several themes and goals that are ultimately expanded upon in the only NMS written in the 2000-2009 examination period. NMS 2004 begins by stressing the three priorities of winning the War on Terrorism, enhancing joint warfighting, and transforming the services for the future. The ultimate goal, as seen in JV 2010 and 2020, is the achievement of full spectrum dominance.¹⁷

The key elements of the 2004 NMS (see Table 14) provide an excellent area of examination in conjunction with the main drivers of National Security Strategy. The events of 9/11 clearly proved to Americans that the security of the nation did not solely lie in protecting against large forces or state actors. Although terms like ‘regional threats’ and ‘radical actors’ had been used in previous issuances of grand strategy, the surprising view of massive non-combatant death in the homeland made words unable to capture the reality of a new era of danger. This new era forced a paradigmatic shift in thinking about national security to include more of the ‘nation’ and not just the overseas threats. Hence, the prioritized national military objectives (see Table 14) begin with protection of the United States promoting peace as the number one military objective (see Table 9), as featured in the 1997 NMS. However, there is a noteworthy uniformity in the NMS of the previous decade, as well as that of 2004, which is the desired attribute and capability focus hinged on *decision superiority*.

¹⁷ Myers, *The National Military Strategy of the United States of America: A Strategy for Today; A Vision for Tomorrow*. pp. viii.

Table 14 Key Elements of 2004 National Military Strategy

National Military Objectives	Strategic Elements/Desired Attributes	Capability Focus
1. Protect the United States Against External Attacks and Aggression a. Countering Threats Close to Source b. Protecting Strategic Approaches c. Defensive Actions at Home d. Creating a Global Anti-Terrorism Environment	1. Fully Integrated —functions and capabilities focused toward a unified purpose	1. Applying Force The application of force against widely dispersed adversaries, including transnational terrorist organizations, will require improved intelligence collection and analysis systems.
2. Prevent Conflict and Surprise Attack a. Forward Posture and Presence b. Promote Security c. Deterring Aggression d. Preventing Surprise Attacks	2. Expeditionary - rapidly deployable, employable and sustainable throughout the global battlespace	2. Deploying and Sustaining Military Capabilities - Force application in multiple overlapping operations will challenge sustainment capabilities.
3. Prevail Against Enemies a. Swiftly Defeat Adversaries b. Win Decisively c. Stability Operations	3. Networked —linked and synchronized in time and purpose 4. Decentralized - integrated capabilities operating in a joint manner at lower echelons 5. Adaptable - quickly prepared to respond with the appropriate capabilities mix. 6. Decision superiority - better-informed decisions implemented faster than an adversary can react 7. Lethality - destroy an adversary and/or his systems in all conditions	3. Securing Battlespace - the Armed Forces must have the ability to operate across the air, land, sea, space and cyberspace domains of the battlespace. Armed Forces must employ military capabilities to ensure access to these domains and requires a multi-layered approach 4. Achieving Decision Superiority - requires precise information of enemy and friendly dispositions, capabilities, and activities, as well as other data relevant to successful campaigns

Source: This table adapted from 2004 NMS pages 9-20

The 2004 NMS defines decision superiority as “the process of making decisions better and faster than an adversary. It is essential to executing a strategy based on speed and flexibility and requires new ways of thinking about acquiring, integrating, and sharing information.”¹⁸ Decision superiority requires a level of battlespace awareness, provided by superior ISR, which translates the enemy order of battle as well as friendly force positioning. Battlespace awareness is made possible using persistent ISR assets and capabilities tailor able to specific audiences and scenarios across all levels of war, capable against various target sets, and adaptive to the needs of Joint force commanders. Thus, “a decision superior joint force must employ decision-making processes that allow

¹⁸ Myers, *The National Military Strategy of the United States of America: A Strategy for Today; A Vision for Tomorrow*. pp. 19.

commanders to attack time-sensitive and time-critical targets,” and “brings together organizations, planning processes, technical systems and commensurate authorities that support informed decisions.”¹⁹ The 2004 NMS is very clear on the approach to future ISR collection and the overall intelligence campaign plan required for decision superiority and battlespace awareness. It states:

Achieving decision superiority in a dynamic environment requires the synchronization and integration of all sources of intelligence . . . must also be continuous across the entire spectrum of conflict, and range of all military operations; pre-hostility, crisis, and major combat operations; to post-conflict stability operations. Intelligence operations strategies are an essential element of this support. Intelligence campaign plans implement these strategies by defining the comprehensive intelligence needs for all phases of operations and campaigns, and multi-discipline collection . . .²⁰

The ability to provide the requisite level of airpower to support the joint requirement falls squarely in the front yard of the U.S. Air Force. Although there are more and more instances of ISR-type UAS’s and other platforms capable of this mission, none have the same level of capability and organic ability to support this mission, assuming that correct doctrine and priorities are offered and acted upon. The ISR mission, conducted in support of the intelligence obligation arising from the need for decision superiority and battlespace awareness, is but part of a set of demands placed upon the service. However, the key elements of the 2004 NMS (see again Table 14) are clear in tying the success of the national military objectives with the desired attribute of decision superiority that is only reachable through intelligence collection from the strategic to tactical levels.²¹

¹⁹ Myers, *The National Military Strategy of the United States of America: A Strategy for Today; A Vision for Tomorrow*. pps. 19-20.

²⁰ Myers, *The National Military Strategy of the United States of America: A Strategy for Today; A Vision for Tomorrow*. pp. 25.

²¹ Myers, *The National Military Strategy of the United States of America: A Strategy for Today; A Vision for Tomorrow*. pp. 16.

Additionally, this NMS version underwent a significant cross-service review in order to provide a cohesive approach to the requirements of the next iteration of NSS. This document, originally drafted in 2002, incorporated the findings of the 2001 QDR, as well as the post-9/11 guidance of the 2002 NSS. Under the direction of the Chairman of the Joint Chiefs of Staff, the evolving document added guidance from the Joint and Service Staff so that the completed document would have the feel of a singular path forward. The final approval process “followed a very coordinated path with the Vice Director of the J-5” and worked “hand in glove with the SECDEF’s planning staff in developing this document.”²² The 2004 NSS, three years in the making, included the services oversight and coordination, took into account the direct strategic guidelines of the 2002 NSS, and placed forward the joint approach to national security as a function of the military.

The United States Air Force Doctrine and ISR Capabilities/Flight Plan 2000-2009

Like the 2004 NMS, the Air Force produced a singular doctrine during this decade. Conceived and motivated by the events surrounding 9/11 and the ongoing conflict against worldwide terror, 2003 Air Force Basic Doctrine Document (AF DD-1) actually begins with acknowledging the critical component of intelligence. General John P. Jumper wrote, “the nature of war has changed and so has the Air Force. Although our fundamental beliefs remain sound, the evolution of contingency operations, the maturation of space and information warfare, and the leveraging power of information technology have transformed the effectiveness of air and space power.”²³

²² Meinhart, "National Military Strategies: A Historical Perspective 1990 to 2012," pp. 89.

²³ USAF, *Air Force Basic Doctrine: Air Force Doctrine Document-1 - 2003*, ed. HQ AFDC/DR Mr. D Robert Poynor, certified by AFDC/CC Maj Gen David F. MacGhee Jr., and approved by Chief of Staff General John P. Jumper, AFDD-1 (Maxwell AFB, AL: Headquarters Air Force Doctrine Center, November 2003).

The 2003 AF DD-1 also contains some critical foundational doctrine statements that underpins the various guidance and employment of air and space forces across the range of military operations. There are 18 total statements that describe the reasoning and message of AF DD-1. These include statements such as, “doctrine shape the manner in which the Air Force organizes, trains, equips, and sustains its forces,” and “air and space forces can pursue tactical, operational, or strategic objectives, in any combination, or all three simultaneously.”²⁴

The key elements (see Table 15) are the main components of comparison in terms of examining the relationship from NSS to NMS to doctrine, and the effects on ISR. One change in the 2003 version of AF DD-1 over that of 1997 is the addition of the core competencies (three). These exemplify what the Air Force calls the “unique institutional qualities that set the Air Force apart from the other services,” and serve as the “foundation upon which we organize, train, and equip, and are the cornerstone of our strength as a military service.”²⁵ However, and examination of the air & space power functions (see Table 15), illustrates a break in the direct efforts of the 2004 NMS

As described in the previous section, the 2004 NMS is actually a combination of guidance that started a cross-service journey of coordination and a DOD-wide campaign for a combined approach to national security. The 2000 and 2002 NSS both identify intelligence as the first line of defense; Joint Vision 2020 (written in May 2000) called for a focused transformation from Cold War-era approaches to conflict and the viewed role of ISR as a key enabler, while the 2004 NMS explained how decision superiority required intelligence gleaned pre-conflict as well as through the timeline of hostilities. Yet, the Air Force asserts, “strategic attack best describes the airman’s overall

²⁴ USAF, *Air Force Basic Doctrine: Air Force Doctrine Document-1 - 2003*: pps. ix-x.

²⁵ USAF, *Air Force Basic Doctrine: Air Force Doctrine Document-1 - 2003*: pps. 73-74.

vision for striking the enemy,” and “may simultaneously hold all of an enemy’s instruments of power at risk unlike any other form of military power.”²⁶ This is where the overall design and scope of Air Force doctrine works against a singular message to the joint community and to the Airmen in the service.

Table 15 Key Elements of 2003 Air Force Doctrine

<u>Roles and Mission (now Distinctive Capabilities)</u>	<u>Tenants</u>	<u>Operational Functions</u>
<p>1. Air and Space Superiority 2. Information Superiority 3. Global Attack 4. Precision Engagement 5. Rapid Global Mobility 6. Agile Combat Support</p> <p>Core Competencies</p> <p>1. Developing Airmen 2. Technology-to-Warfighting 3. Integrating Operations</p> <p>(note – these three core competencies are new to the AF DD-1 series)</p>	<p>1. Centralized Control and Decentralized Execution 2. Flexibility and Versatility 3. Synergistic Effects 4. Persistence 5. Concentration 6. Priority 7. Balance</p>	<p>1. Strategic Attack 2. Counterair 3. Counterspace 4. Counterland 5. Countersea 6. Information Operations (IO) 7. Combat Support 8. Command and Control 9. Airlift 10. Air Refueling 11. Spacelift 12. Special Operations 13. Intelligence 14. Surveillance and Reconnaissance 15. Combat Search and Rescue (CSAR) 16. Navigation and Positioning 17. Weather Services</p>

Source: This table adapted from 2003 Air Force DD-1 pages 27-33, 39-58, and 74-82

AF DD-1 lists six distinctive capabilities (see Table 15) that “are not necessarily unique to the Air Force, but represent what the Air Force does better than any other organization.”²⁷ These six items add another layer of material, but do not necessarily clarify the Air Force’s intent or priority in terms of overall effort or importance in how a potential air campaign may progress. Nor does it prioritize how a JFC may expect the Air Force to apportion weight of effort when compared with the 17 operational functions. If taken alone, AF DD-1 does seem to align well with the strategic guidance in the NMS regarding decision superiorities requirement for timely intelligence:

²⁶ USAF, *Air Force Basic Doctrine: Air Force Doctrine Document-1 - 2003*: pp. 41.

²⁷ USAF, *Air Force Basic Doctrine: Air Force Doctrine Document-1 - 2003*: pp. 76.

Dominating the information spectrum is as critical to conflict now as controlling air and space, or as occupying land was in the past, and is seen as an indispensable and synergistic component of air and space power. Whoever has the best ability to gather, understand, control, and use information has a substantial strategic advantage. Emerging concepts and tools of information warfare allow commanders to deny, destroy, corrupt, or otherwise manipulate an adversary's information and command and control.²⁸

This section does illustrate a very good insight, as well as a genealogical tie to both the NMS and the NSS documents that fed the thoughts and written guidance of the Air Force. Again, the intent of the Chairman's decision in 2002 to delay the issuance of a NMS that year was to provide each service the opportunity to provide insight as well as provide time to build in the NMS priorities into the individual service doctrines. The issue lies in the various amounts of doctrinal adjectives and adverbs that may or may not provide a sole foundational priority for Air Force planners and acquisition teams; tenets, core competencies, distinctive capabilities, operational functions, and the discussion between them lack a unified prioritization that describes a directional path.

In this decade, AF DD-2-ISR Operations Doctrine remained unchanged from that issued in April of 1999. However, a new Air Force Policy Directive 14-1 ISR Planning, Resources, and Operations did debut in April 2004, created by the Air Forces Director of ISR, Deputy Chief of Staff for Air and Space Operations (HQ USAF/XOI). AF PD 14-1 provided the "guidance for ISR planning and operations," and describes the role of USAF/XOI as required by DOD directives.²⁹ The policy itself does not contain any formative guidelines for future planning or even a prioritized shopping list for intelligence assets. The document does outline the new organizational structure for many

²⁸ USAF, *Air Force Basic Doctrine: Air Force Doctrine Document-1 - 2003*: pps. 78-79.

²⁹ USAF, "Air Force Policy Directive 14-1 ISR Planning, Resources, and Operations-2004," ed. HQ USAF/XOIIR (Washington, DC: Department of the Air Force, April 2004), pp. 1.

of the intelligence community members within the service. The contents remain an administrative piece and does not point to any other guidance regarding ISR acquisition, planning, or force structure priorities.

The Air Force did, however, make a service-wide decision for ISR by releasing Program Budget Decision 720 in December 2005. PBD-720 initiated several cuts to programs that included the acceleration of the F-117 retirement, removal of upgrades for the B-52, and placed a retirement date on the U-2 program that would begin in FY'07 and be complete by FY'11. Instead of maintaining both platforms, the newly acquired Global Hawk program would serve as the Air Force's only high-altitude long-range strategic ISR platform.³⁰ This would remove a layered approach to platforms and remain dependent on a system that had neither the sensor range to reach certain targets, nor the capability to enter defended targets due to a lack of defensive system. Those tradeoffs were softened, given the Global Hawk's superior range and loiter time. Yet the Air Force, prior to PBD-720, was already at a 30-year low for ISR platforms.³¹ The DOD as a whole had increased spending towards ISR from \$1.5 billion in FY-01 to over \$4.5 billion just 4 years later and supported a 200% increase in platforms in support of CENTCOM's AOR from 2001 to 2005.³² In fact, ISR weapon systems between FY-00 and FY-09 increased 288%, transport dropped 17%, tankers dropped 22%, fighters dropped 9%, and bombers dropped 22%.³³ Given that each of these obvious increased demands for ISR, the Air Force leveraged one system against the other and offered to retire the U-2 during the

³⁰ Department of Defense DOD, "PBD-720 Air Force Transformation Flight Plan," ed. Under Secretary of Defense (Comptroller) (Washington, DC: Department of Defense, December 2005), pps. 5-7.

³¹ Isherwood, *Layered ISR- USAF Investment for the Joint Team*. information taken directly from slide-4 in the presentation.

³² HPSCI, "Performance Audit of Department of Defense Intelligence, Surveillance, and Reconnaissance" pp. iv.

³³ Isherwood, *Layered ISR- USAF Investment for the Joint Team*. information from chart on slide-6.

middle of a meteoric rise in appeals for ISR. This failure to identify the requests for ISR led to the creation of an ISR Task Force under the direct control of the SECDEF. The 18 April 2008 memorandum to the service secretaries, Chairman of the Joint Chiefs, the Under Secretary of Defense, and the Director of Program Analysis and Evaluation states:

Over the last year, the Department of Defense has taken multiple steps to address the operational demand (for ISR) and has significantly increased deployed capabilities. Nonetheless, I remain convinced that more must and can be done. I am establishing a Department-wide task force to assess and propose options for maximizing and optimizing currently deployed ISR capability. The Operational ISR Task Force will specifically identify and recommend solutions to resource, authority, program and other challenges associated with deploying increased ISR capability to the USCENTCOM AOR. The Task Force shall additionally examine the utilization of ISR assets in support of OIF and OEF.³⁴

This creation of the ISR task force signaled an intervention from outside the Air Force and illustrated the services' deficiency in providing the requisite level of ISR support. It also included the need for a tactical platform more suited to the conflict's characteristic of urban warfare and counter insurgency.

This same year, the Air Force created the Headquarters Air Force A2D-Directorate for Strategy, Integration and Doctrine, created the first codified Air Force ISR Strategy, reorganized the internal service ISR enterprise, and set the conditions for the first ISR flight plan which would release in 2009.³⁵ Lt Gen Deptula understood the importance of providing the required information dominance requested in the National Military Strategy, and worked to gain decision superiority through a renewed embracement of integrated ISR and accompanying Air Force strategy. The ISR Flight

³⁴ Mr. Ed Loxterkamp, Advanced Systems and Concepts Joint Capability Technology Demonstrations (A presentation to SECDEF ISR Task Force), (Washington, DC: Department of Defense, June 2009), <http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA511680> (accessed 3 April 2013). PowerPoint. information derived directly from the memorandum included Secretary of Defense.

³⁵ Lt Gen David Deptula, AF ISR Flight Plan- Implementing the Air Force Strategy...to improve ISR capability, (Washington, DC: Office of the Deputy Chief of Staff, ISR, July 2009), <http://www.docstoc.com/docs/8484097/AF-ISR-Flight-Plan> (accessed 2 February 2013). PowerPoint. information from slides 3 and 7.

Plan took the SECDEF's guidance, as well as the accomplishments of the ISR Task Force, and created a unified plan to integrate ISR capability into the services normalized development process.³⁶

What ISR Did the Air Force Provide – 2000 – 2009?

The Air Force faced a significant backlash in terms of providing ISR to the Joint Force. The creation of the ISR Task Force, the lack of a well-integrated ISR flight plan, and the continued ISR requirement by the COCOM's forced an intervention. The SECDEF intervened with a plan external to preemptive Air Force action with a plan to acquire additional ISR platforms, which turned out to be the acquisition of the MC-12. Additionally, combat air patrols of MQ-1's and MQ-9's were directed, and spending was rapidly force fed into the commercial market in order to bridge the tactical ISR GAP. Since 9/11, the DOD increased its spending for ISR from \$1.5 billion in FY01 to nearly \$9 billion through FY12 with ISR platform increases of 238% since 2008.³⁷

Operations in Iraq and Afghanistan no longer required need for air superiority, but the ground fight did need airborne ISR in order to support the constant ground tracking of enemy troop movements and IED detection. The Air Force did not provide any marked increase in ISR until *after* nearly 5 years of COIN operations in two theaters. Figure 7 depicts the continued lethargic approach to ISR, despite the push for additional forces. In 2000, the House Intelligence Committee concluded that the Air Force, despite an extensive over-utilization of the high-demand/low-density assets, had yet to progress forward in gaining any form of relief and that "the overall ISR capabilities and resources

³⁶ Deptula, *AF ISR Flight Plan- Implementing the Air Force Strategy...to improve ISR capability*. slide 5.

³⁷ HPSCI, "Performance Audit of Department of Defense Intelligence, Surveillance, and Reconnaissance" pp. iv.

are decreasing at a time when our military forces are relying on them more and more.”³⁸

In fact, the Air Force had not only failed to meet the aircraft requirements, but the actual budgetary and programmatic additions to the service budget were being siphoned off to fulfill shortfalls in other programs.

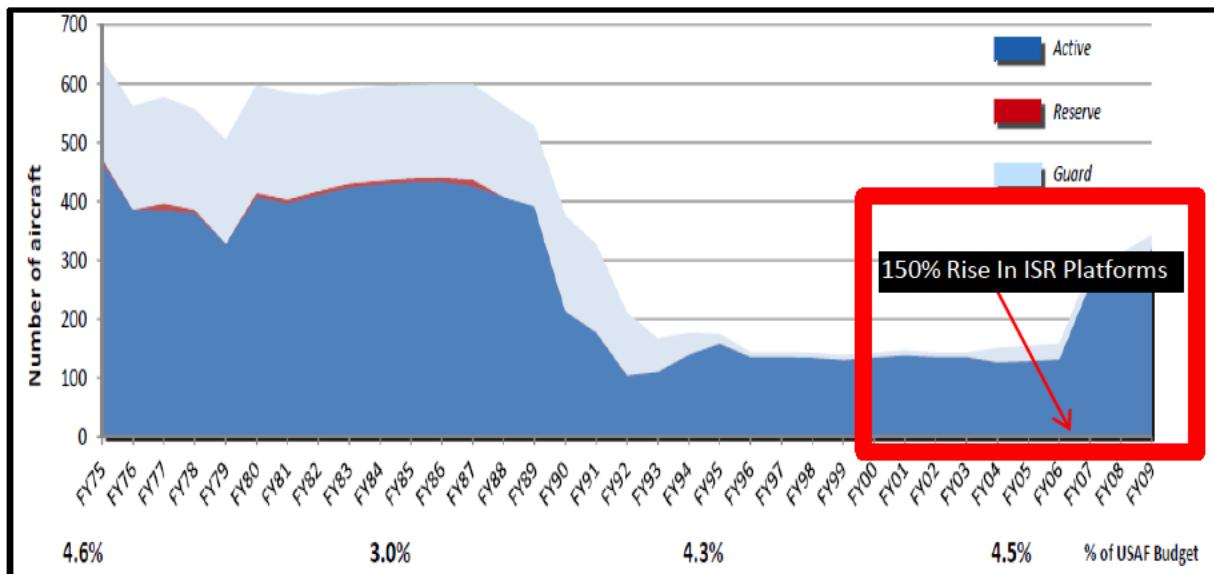


Figure 7 Trends in USAF Airborne ISR FY75 - FY09 - Focus FY00 - FY09 (Graphic from Billy Mitchell Institute Brief- http://www.afa.org/Mitchell/presentations/011712_MP8_ISR_slides.pdf page 4)

Congressional oversight and research committees concluded that “funding from many intelligence community programs, including ISR aircraft, are regularly transferred from the programs for which funds were authorized and appropriated to fund shortfalls in other programs often not related to ISR requirements.”³⁹ The DOD, at the request of the Air Force, exacerbated the shortage of long-term ISR programming by issuing Program

³⁸ Best and Bolkcom, “Congressional Research Report-Airborne Intelligence, Surveillance & Reconnaissance (ISR): The U-2 Aircraft and Global Hawk UAV Programs,” pp. CRS-14. This information is as cited in the CRS report and can also be found at U.S. Congress, 106th Congress, 2d session, House of Representatives, Permanent Select Committee on Intelligence, *Intelligence Authorization Act for Fiscal Year 2001*, Report, May 16, 2000, H.Rept. 106-620, p. 9.

³⁹ Best and Bolkcom, “Congressional Research Report-Airborne Intelligence, Surveillance & Reconnaissance (ISR): The U-2 Aircraft and Global Hawk UAV Programs,” pp. CRS-15. Information is as cited in CRS report and also found in U.S. Congress, 106th Congress, 2d session, House of Representatives, Permanent Select Committee on Intelligence, *Intelligence Authorization Act for Fiscal Year 2001*, Report, May 16, 2000, H.Rept. 106—969 pp.27

Budget Decision-720 (PBD-720) in 2005 while issued guidance to retire the U-2 no later than FY11 and utilize the as of yet unproven Global Hawk RQ-4 Advanced Technology Demonstrator.

Figure 8 shows the same separation of percentage of platforms in relation to the total number of aircraft systems within the Air Force inventory. From FY00 to FY06, ISR maintained the same relative percentage of under 4% of the total fleet. This changed in FY 2007, with a jump to near 6% and continued at that level into FY 09.

In 2003 during Operation Iraqi Freedom, ground forces requesting tactical ISR would only have the use of nine Predator RPA's at their disposal.⁴⁰ However, the push to gain more RPA's and fill a desperate need in the tactical ISR world went largely unanswered. Other ISR platforms, such as the U-2 and Rivet Joint, modified their standard mission profiles in order to better assist the ground controllers in locating IED's as well as mobile communication systems in use by the enemy.

These organic adjustments were insufficient to meet the demands of Secretary Gates, who proceeded to form and sanction the ISR Task Force of 2008. In a brief to the Air War College in 2008, he stated, "I've been wrestling for months to get more ISR assets into the theaters [but] because people were stuck in old ways of doing business, it's been like pulling teeth. I've just found that the only way to get a lot of these things that are high priority that we need into theater now is for me to take ownership of the problem and galvanize the DOD."⁴¹

⁴⁰ Rebecca Grant, "The All-Seeing Air Force," *Air Force Magazine-Online Journal of the Air Force Association* Volume 91, no. No.9 (September 2008), <http://www.airforcemag.com/MagazineArchive/Pages/2008/September%202008/0908airforce.aspx> (accessed 2 May 2013).

⁴¹ Grant, "The All-Seeing Air Force". pp. 1.

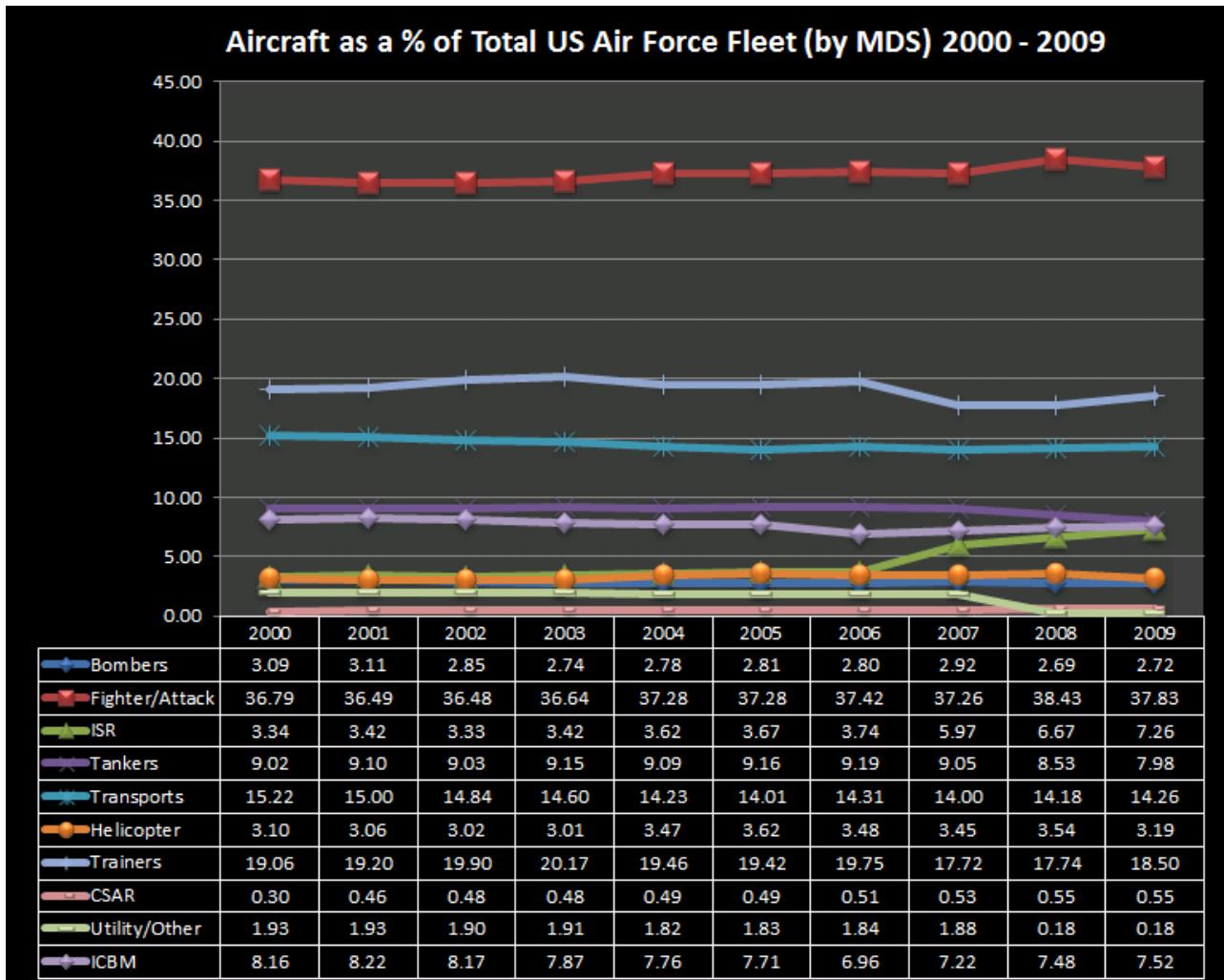


Figure 8 Aircraft Comparison (by MDS) as a Percentage of Total USAF Fleet 2000 – 2009
 Source: This is the authors' own compilation of raw data from *Arsenal of Airpower pages 25-26*

Summary 2000 – 2009

September 11, 2001 is no doubt the most significant single event that occurred in this decade. The conflict in Afghanistan and operations in Iraq symbolize a decade-long commitment to fighting the remnants of radical terrorists who seek to destroy democracy and the western way of life. The Presidents, military leaders, and American's writ large faced a markedly different security threat characterized by increasing non-state actors, terrorism, and the need to obtain non-Cold War type capabilities applicable to full

spectrum dominance.⁴² The National Security Strategy of 2002 illustrated the new commitment to combating a demonstrated threat, a threat which inflicted a major change to the American way of life. The creation of the Department of Homeland Security, the TSA lines at the airport, the creation of a national alert system, and an overall introduction to the world of Al Qaeda and Jihad warfare has signaled a fundamental change in the way the U.S. approaches non-state actors and the need for a constant inflow of information at various levels. ISR and the spectrum of targets were vastly different from the fielded forces and must now search for illusive cells and pockets of individuals.

Both the 2002 and 2006 National Security Strategies issued guidance on transformation actions within the military and placed a premium on the ability not only to deter adversaries, but also maintain a portfolio of assets that departed from the Cold War mentality of large force-on-force constructs. *Intelligence would be the first line of defense* and give national leaders the needed watchful eye on potential threats. The grand strategic guidance placed forth did not necessarily speak directly to one single service, but the fact that both documents each lasted through an entire single term was a signal of the commitment by the administration towards the concepts.

The 2004 National Military Strategy took into account the predictions and doctrinal evolutions inspired by Joint Vision 2010 and Joint Vision 2020. Both Joint Vision documents looked to transform the services for the future, included terrorism, and the counter-insurgency battle as key requirements for intelligence. The attacks on 9/11, however, refocused the security lens towards the homeland, and an impaired ability for decision superiority.⁴³ In order to reach decision superiority, ISR assets need to be

⁴² Meinhart, "National Military Strategies: A Historical Perspective 1990 to 2012," pp. 81.

⁴³ Myers, *The National Military Strategy of the United States of America: A Strategy for Today; A Vision for Tomorrow*. pp. 19.

capable across the range of military operations, as well as the various levels of war.

Stated another way, ISR assets must be capable of strategic employment, while others must be able to work at the tactical level, which requires a more dynamic and specially designed platform. In terms of the U-2 and Global Hawk, they did satisfy the strategic and operational domain. However, the tactical area of support fell to the hybrid utilization of non-traditional ISR systems that were otherwise designed for a role other than ISR.

The Air Force, having retired the tactical ISR platforms of Vietnam and Desert Storm, did not follow with any particular priority for ISR as a function of the overall mission of the Air Force. The 2003 AF DD-1 clearly shows the operational functions and roles/mission of the service, but does not illustrate the pre-conflict requirement for battlefield situational awareness. This prerequisite for understanding the enemies movements and capabilities, introduces an initial assumption into any application of airpower. This assumption is that when the fight for air and space superiority begins, the joint force commander will already have all the necessary information required and be able to make the correct application of military power despite the fog of war.

Additionally, despite the increase in ISR operations in the Middle East, the Air Force moved forward with PBD-720, retiring half of its high-altitude strategic reconnaissance capability without any publically reviewable ISR strategic view. This mismatch in service priorities in conjunction with the creation of the ISR Task Force resulted in the force-fed introduction of Project Liberty (MC-12W) into the fleet. Not until April 2009, nearly 8 years after the events of 9/11 and a raging battle in both Iraq and Afghanistan, does a single person successfully create a plan for the future. Lt Gen Deptula and the ISR Flight Plan were now part of the Air Force multilingual dictionary.

Chapter 4

National Security, Military Strategy, and Air Force Doctrine 2010 – Present

From Vietnam to 9/11, the military forgot that every operation has to be a fight for intelligence, and this came right when the intelligence community is being downsized too. It took us 6-8 years after 9/11 to really relearn that the intelligence you exploit from a mission is just as important as who you might kill on the mission.

Erik J. Smith in
CounterStrike

The last group of strategic documents in this examination includes the 2010 National Security Strategy, the 2011 National Military Strategy, the 2011 AF DD-1 and 2012 AF DD-2. This group will complete the examination of guidance, Air Force Doctrine, and ISR strategy. The same key elements are utilized as the previous two chapters and will conclude with a final review of the current standing leading into a review of the overall impacts of ISR in terms of the U-2, Global Hawk, and MC-12. The previous two chapters have each concluded with the summation of fragmented relationship between grand strategic guidance, DOD guidance, and the Air Force's embracement of the role of ISR as well as the presentation of capabilities required by the joint force.

National Security Strategy 2010 - Present

The National Security Strategy of May 2010 clearly stated President Obama's guidance as Commander-in-Chief. In his guidance, he voices concerns of the fiscal issues that plague the national defense budget, the continuing war against terrorism, the continued role of the military as "the cornerstone of our security."¹ The future, still

¹ President Barack H. Obama, National Security Strategy-2010, (Washington, DC: The White House, May 2010), <http://nssarchive.us/NSSR/2010.pdf> (access 13 Dec 2012). opening statement, no page numbers.

under the influence of instability in the Middle East, requires the United States continue to pursue a grand strategic quest for global leadership, which means the range of prospective military operations is wide open. The President's words clearly articulate the environment depends on our ability to see beyond today's commitments, charge the military with the duty to build and integrate the capabilities we possess, and work within the economic constraints that face every organization within the United States government.

The 2010 NSS vividly explains the current security environment as a "broad and complex array of challenges to our national security . . . wars of ideology have given way to wars over religious, ethnic, and tribal identity."² In order to accomplish this, the nation must undertake a whole of government approach to upgrading the national security capacity while modernizing the capabilities currently in the inventory. One of the requirements is that the "intelligence capabilities must continuously evolve to identify and characterize conventional and asymmetric threats."³ For defense, there is guidance that places a premium on the ability to answer a wide variety of threats and environments.

We are strengthening our military to ensure that it can prevail in today's wars; to prevent and deter threats against the United States, its interests, and our allies and partners; and prepare to defend the United States in a wide range of contingencies against state and non-state actors. We will continue to rebalance our military capabilities to excel at counterterrorism, counterinsurgency, stability operations, and meeting increasingly sophisticated security threats, while ensuring our force is ready to address the full range of military operations.⁴

This request for a focus on the range of operations and not just a single aspect of military action is also part of an additional call for an increase in the intelligence capacity.

² Obama, *National Security Strategy-2010*. pp. 1.

³ Obama, *National Security Strategy-2010*. pp. 14.

⁴ Obama, *National Security Strategy-2010*. pp. 15.

“Our country’s safety and prosperity depend on the quality of the intelligence we collect and the analysis we produce . . . this is as true for the strategic intelligence what informs executive decisions as it is for intelligence support” to the realm of tactical operations that support national security.⁵ This quote from the 2010 NSS describes the wide range of an intelligence application, from the strategic to the tactical level of any conflict. The various events that may challenge or test the grand strategic imperatives of the United States must have an associated level of support from the DOD. For example, one of the goals in the African region is to prevent genocide and mass atrocities. This is a need to deal with individual behavior in a rapidly changing environment, suitable for a tactical intelligence capability vice one designed to detect more strategic targets.

Table 16 illustrates the key elements of the 2010 NSS as well as the markedly different approach to creating strategic focus for the United States. The most significant change is the broad national objectives. These objectives, and the expanded goals visible in the table above, occupy a greater portion of the NSS as a whole when compared to the other versions in this examination. The impact on the requirement for intelligence resides in the type of mission that would support each of these goals. Not only will strategic assets be required, especially given the fact area to cover based on the goals, but some of the missions are tailored to a more dynamic and tactical level platform. Additionally, the defense agenda includes a rebalancing section, much like the military transformation of 2006 NSS, that produces five critical elements that ranges from counterterrorism to defense of homeland mission (see Table 16). Again, in terms of capabilities, the defense strategy and associated service contribution must be able to answer challenges not

⁵ Obama, *National Security Strategy-2010*. pp. 15.

associated with ‘major theater war’ type actions.

Table 16 Key Elements of 2010 National Security Strategy

<u>Broad National Objectives</u>	<u>Regional Challenges and Responses</u>	<u>Defense Agenda</u>
<p>1. Security</p> <ul style="list-style-type: none"> a. Strengthen at Home b. Defeat Al Qaeda c. Reverse the Spread of WMD d. Advance Peace in the Greater Middle East e. Invest in the Capacity of Strong and Capable Partners f. Secure Cyberspace <p>2. Prosperity</p> <ul style="list-style-type: none"> a. Strengthen Education and Human Capital b. Enhance Science and Innovation c. Focus on Economy d. Accelerate Sustainable Development e. Spend Taxpayers’ Dollars Wisely <p>3. Values</p> <ul style="list-style-type: none"> a. Lead by Example b. Promote Democracy and Human Rights c. Promote Dignity <p>4. International Order</p> <ul style="list-style-type: none"> a. Ensure Strong Alliances b. Build Cooperation with Other 21st Century Centers of Influence c. Strengthen Cooperation Methods d. Sustain Broad Key Global Challenge Cooperation 	<p>The 2010 NSS did not utilize the same regional strategic breakout as in previous years. Two statements capture the new essence of the inward focus:</p> <ol style="list-style-type: none"> 1. “Our national security begins at home. What takes place within our borders has always been the source of our strength, and even truer in an age of interconnection.” 2. “First and foremost, we must renew the foundation of America’s strength. In the long run, the welfare of the American people will determine America’s strength in the world, particularly at a time when our own economy is inextricably linked to the global economy.” 	<ol style="list-style-type: none"> 1. Prevail in Today’s Wars 2. Prevent and Deter Threats Against the United States, its Interests, and Allies 3. Prepare to Defend the United States across the range of military operations and against state and non-state actors 4. Continue to Rebalance our Military Capabilities to Excel in: <ul style="list-style-type: none"> a. Counterterrorism b. Counterinsurgency c. Stability Operations d. Future Threats in Anti-Access/Area Denial Environment e. Defend the United States and the Civil Authorities at Home

Source: This table adapted from 2010 NSS pages 9-14, and 17-50

National Military Strategy 2011 – Current

The 2011 NMS serves as the singular example during this current decade of examination. Like many of the previous examples, Admiral Mullen, Chairman of the Joint Chiefs of Staff, describes the purpose of the NMS “is to provide the ways and means by which our military will advance our enduring national interests as articulated in the 2010 National Security Strategy and to accomplish the defense objectives in the 2010 QDR.”⁶ The underpinning articles of the NMS explain how the U.S. will redefine

⁶ Admiral Michael Mullen, The National Military Strategy of the United States of America: Redefining America’s Military Leadership, (Washington, DC: Office of the Chairman of the Joint Chiefs of Staff,

America's leadership role, new trends in the strategic environment, and articulate regional priorities. Each of these broad themes are also placed in context with the confined economic constraints pervasive in today's military planning environment.⁷ However, the overarching theme of the NSS places a premium on an asset that is not normally procured through normal acquisition or planning conduits.

A mild departure from previous version of NSS is a focus on *leadership* as the 'how' in the application of full spectrum power in defense of the nation and during the application of military power around the world. It specifically "acknowledges the need for military leadership that is redefined for an increasingly complex strategic environment."⁸ Along with shaping the future force through a focus on leadership and not just power, the 2010 NSS stresses the continued pursuit of innovative ways to provide the full range of capabilities required to meet thus complex environment. "Tradeoffs between modernization, capacity, capability, posture, and risk" are ⁹

The 2011 NSS differs by separating the overall capability focus by domain vice broad mission areas. Each domain must then meet the desired attributes outlined in Table 17. The focus for Air requires a full spectrum force that can be employed around the world and still apply flexible power in a variety of environments. The military objectives remain consistent from years past but focus more on capabilities that pertain to threats outside of major theater war. The focus on WMD remains, as does the need for full spectrum dominance.

February 2011), http://www.jcs.mil/content/files/2011-02/020811084800_2011_NMS_-08_FEB_2011.pdf (accessed 16 December 2012). in the introductory memo from Admiral Mullen.

⁷ Mullen, *The National Military Strategy of the United States of America: Redefining America's Military Leadership.* in the introductory memo from Admiral Mullen.

⁸ Mullen, *The National Military Strategy of the United States of America: Redefining America's Military Leadership.* pp. 1.

⁹ Mullen, *The National Military Strategy of the United States of America: Redefining America's Military Leadership.* pp. 16.

For ISR, this means that a tiered approach must be maintained in order to meet both the anti-access/area-denial scenarios (strategic platform), as well as those that are general purpose capable of employment across the full range of military options (strategic to tactical). A singular platform currently does not exist that could answer this call entirely for ISR which point to an interconnected approach to providing capability.

Table 17 Key Elements 2011 National Military Strategy

National Military Objectives	Strategic Elements/Desired Attributes	Capability Focus
<p>1. Counter Violent Extremism – will require the employment of military force in concert with other instruments of power that utilizes a disciplined application of force</p> <p>2. Deter and Defeat Aggression</p> <p>a. Deter - deterring nuclear attacks remains the fundamental role of American power for the nation and its allies. Joint Force must have the ability to detect and interdict movement of WMD material</p> <p>b. Defeat – defending the nation and winning its wars remains the core task. Force must be able to counter anti-access and area-denial strategies</p> <p>3. Strengthen International and Regional Security – requires that our forces be globally-available, yet regionally focused</p> <p>4. Shape the Future Force - the focus on leadership, not just military power, requires an emphasis on values and people as much as systems and capabilities</p>	<p>1. Modular</p> <p>2. Adaptive</p> <p>3. General Purpose Ready For Employment In The Full Range of Military Operations</p> <p>That must ensure...</p> <p>A. Access</p> <p>B. Freedom of Maneuver</p> <p>C. Ability to Project Power Globally Through All Domains</p>	<p>1. Land – capable of full spectrum operations, and be organized to provide a versatile mix of tailorable forces</p> <p>2. Maritime – Joint forces will include an appropriate mix of small mission tailored and large, multi-mission capable units, formations and platforms</p> <p>3. Air – Joint Forces will perform full spectrum operations to secure, maintain, and assure unhindered domain access, global strike, rapid global mobility, globally integrated ISR, C2, and retain the ability to project power into distant, anti-access environments</p> <p>4. Space – pursue resilient architectures, space situational awareness, provide options for self-defense and reconstitution, maintain symmetric and asymmetric capabilities to deter adversaries, and train for operations in space-degraded environments.</p> <p>5. Cyberspace – will secure the ‘.mil’ domain, employ a combination of detection, deterrence, denial, and multi-layered defense, and improve our cyberspace capabilities so they can achieve effects with less cost and lower collateral impact</p>

Source: This table adapted from 2011 NMS pages 4-16, and 18-19

This lies at the center of the 2009 ISR Task Force described in the previous chapter. Charles Dunlap, in his *Parameters* article, captured the thoughts of a battlefield commander regarding the impact of ISR from strategic to tactical platforms, he quotes;

“We have made a 100-year war-fighting lead-ahead with MQ-1, MQ-9, and Global Hawk . . . a host of ISR sensors and communications potential that have fundamentally changed

the nature of warfare.”¹⁰ The change is towards a knowledge-based environment where battlefield commanders depend on the reach-back capability of the current stable of ISR platforms that can help steer both the weight and prioritization of operational level effects.¹¹

The United States Air Force Doctrine and ISR Capabilities/Flight Plan 2010 - Present

The 2010 AF DD-1 is the first Air Force doctrine in this examination to clearly depart from the mindset of providing a narrow level of airpower that did not adequately meet the needs of the Joint Force. The Air Force, fresh off the termination of the Chief of Staff and Air Force Secretary, is on the pursuit to remedy the irreconcilable differences between what the service valued as airpower and what the Joint Force required in air capability. General Norton Schwartz’s opening memo set the stage for the Air Force’s new commitment to capabilities and assets that typically may or may not be considered part of the core mission of the service.

Historically, airpower has been associated with its more familiar and visible aspects, such as air-to-air combat, strategic bombing, and long-range heavy airlift. However, airpower has many less visible but equally important missions across the range of military operations: providing close air support and tactical mobility to our ground forces; positioning and resupplying remote forces; obtaining and providing detailed and timely intelligence, surveillance and reconnaissance; providing humanitarian relief; projecting world-wide command and control; and training of coalition partners in the use of airpower, just to name a few.¹²

¹⁰ Charles J. Dunlap, "Making a Revolutionary Change: Airpower in COIN Today," *Parameters: U.S. Army War College Quarterly* 38, no. 2 (2008): pp. 57. This is a quotation taken directly as cited by Dunlap and originally found in Barry R. McCaffrey, "Memorandum for Colonel Mike Meese, United States Military Academy, Subject:..

¹¹ Mullen, *The National Military Strategy of the United States of America: Redefining America's Military Leadership*. pp. 19.

¹² USAF, *Air Force Basic Doctrine, Organization, and Command: Air Force Doctrine Document-1 - 2011*: opening statement.

The need for a wider view of airpower is long overdue. The NMS and NSS both looked for ‘transformation of the services’ as well as capability options that allowed for flexible utility across the levels of war and the range of military operations. The SECDEF created ISR Task Force, and the fact that Air Force top leadership engaged in a quest to attain a capability in the F-22 that did not either support the current fight, or leave room for additional acquisitions like the next-gen Tanker or additional ISR illustrates the rut the service is accused of occupying. The 2011 NMS describes how “the Joint Force will redefine America’s military leadership by enabling whole-of-nation approaches to address national security challenges.”¹³ The Air Force endured such a change.

The 2011 AF DD-1 acknowledges the changed nature of war and demonstrates the need for systems that depart from the traditional path chosen by the Air Force. The large-scale force-on-force conflicts that dominated Cold War-era forecasting as well as those seen in Operation Desert Storm “are now viewed as the exception, replaced by the complex and unpredictable pace of irregular war against nontraditional enemies.”¹⁴ In other words, the doctrine of the Air Force has now showing progression towards embracing a wider view of potential utility of airpower in various types and levels of warfare.

Table 18 illustrates the changes in presentation of the Air Force’s doctrinal roles and missions. There are now 12 total core functions, which serve to integrate the

¹³ Mullen, *The National Military Strategy of the United States of America: Redefining America's Military Leadership*. pp. 21.

¹⁴ USAF, *Air Force Basic Doctrine, Organization, and Command: Air Force Doctrine Document-1 - 2011*: pp. vii.

previously termed distinctive capabilities, and operational functions. These core functions ultimately “express the ways in which the Air Force is particularly and appropriately suited to contribute to national security, but do not necessarily express every aspect of what the Air Force contributes to the nation.”¹⁵ These core functions begin with the same prioritized threat as the NSS and NMS, but follow with placing domain control (air, space, cyberspace) as key responsibilities of airpower.

Table 18 Key Elements of 2011 Air Force Doctrine

<u>Roles and Mission (now Core Functions)</u>	<u>Tenants</u>	<u>Operational Functions</u>
<p>1. Nuclear Deterrence Operations 2. Air Superiority 3. Space Superiority 4. Cyberspace Superiority 5. Command and Control 6. Global Integrated ISR 7. Global Precision Attack 8. Special Operations 9. Rapid Global Mobility 10. Personnel Recovery 11. Agile Combat Support 12. Building Partnerships</p> <p>(Note: In the previous versions, these were also called <i>Distinctive Capabilities</i>, or <i>Operational Functions</i>)</p>	<p>1. Centralized Control and Decentralized Execution 2. Flexibility and Versatility 3. Synergistic Effects 4. Persistence 5. Concentration 6. Priority 7. Balance</p>	<p><u>(Now integrated into 51 total characteristics of the Core Functions)</u></p>

Source: This table adapted from 2011 Air Force DD-1 pages 37-43

Gone are the major focal points of a specific mission over the next, and the entire AF DD-1 document shifts the mindset of Air Force as a purveyor of a singular mission, to a provider of airpower. This shift, undoubtedly energized by the SECDEF’s and Joint Forces critiques that the myopic presentation of service capability continued to follow a certain path despite the needs set forth by the changing nature of war from major combat to regional conflicts and irregular war. AF DD-1 describes a force that is about

¹⁵ USAF, *Air Force Basic Doctrine, Organization, and Command: Air Force Doctrine Document-1 - 2011*: pp. 43.

warfighting and not physics, of effects and not platforms, and of “using a medium to obtain the best warfighting effects, not of carving up the battlespace based on service or functional parochialism.”¹⁶

The 2012 Global Integrated ISR Operations AF DD-2 is the first of its kind within the Air Force that takes a remarkably different stance towards both the utility and predominance of ISR within the larger scope of military operations. A four-year ISR transformation within the Air Force is captured in AF DD-2 as well as a foundational modification in the way ISR can and will support COCOMS and the Joint Force:

AF ISR has been engaged in wartime and peacetime operations for decades and has responded by demonstrating and projecting US power globally. We have come a long way from the days of wondering what is going on just over the next hill, or half a world away. As we have learned in the current conflicts, Air Force *ISR is operations* [emphasis added] and shapes and drives decision-making. The Office of the Secretary of Defense, as well as the Joint Staff, does not segregate ISR. ISR is often the first capability a combatant commander requests and employs prior to and upon the initiation of military operations. Often it must persist even after major combat operations have ended.¹⁷

Thus, the transformation codified in various versions of National Security and National Military Strategy were now weaved into the core of Air Force presentation of capabilities. The ability to provide ISR capability across the range of military operations (ROMO) that is also relevant, accessible, secure, robust, and sustainable are now part of a formalized doctrinal lexicon for the Air Force.

AF DD-2 goes a step further and directly answers the intelligence requirements inherent in both the NSS and NMS. This link from NSS to Air Force level operational level guidance is critical to the examination of grand strategic guidance, doctrine, and a

¹⁶ USAF, *Air Force Basic Doctrine, Organization, and Command: Air Force Doctrine Document-1 - 2011*: pp. 5.

¹⁷ USAF, *Global Integrated Intelligence, Surveillance, & Reconnaissance Operations: Air Force Doctrine Document 2-0-2012*, ed. LeMay Center/DDS, certified by LeMay Center/CC Maj Gen Thomas K. Anderson, and approved by Chief of Staff General Norton A. Schwartz (Maxwell AFB, AL: LeMay Doctrine Center Publishing, January 2012). opening statement.

final evaluation of acquisition impacts to ISR. First, the Air Force contributes to the specific NSS goals on a daily basis through the information garnered from global integrated ISR that is shared globally to both prevent future terrorist attacks and to diffuse regional conflicts. Second, the Air Force meets the intent of the 2011 NMS by providing an assured method of global ISR that is capable within the ROMO and in degraded environment.¹⁸ Combined, these two internal reviews assist in clarifying the internal renovation undertaken by the Air Force to incorporate the changing mission requirements of the more prevalent irregular warfare conflicts currently taxing our military.

What ISR Did the Air Force Provide – 2010 – Present?

The ISR Task Force, enacted outside the confines of Air Force control, largely impacted the growth of tactical ISR within the service. However, the focus of the Task Force did not necessarily look to replace or add platforms, but approached the problem by attacking the problem by addressing the actual shortfall. That shortfall was in three main areas: Signals Intelligence (SIGINT), Moving Target Indicator (MTI), and Full Motion Video (FMV). The programmatic timeframe looked to increase Airborne ISR capability using the year 2020 as projected end state.

¹⁸ USAF, *Global Integrated Intelligence, Surveillance, & Reconnaissance Operations: Air Force Doctrine Document 2-0-2012*: pp. 8.

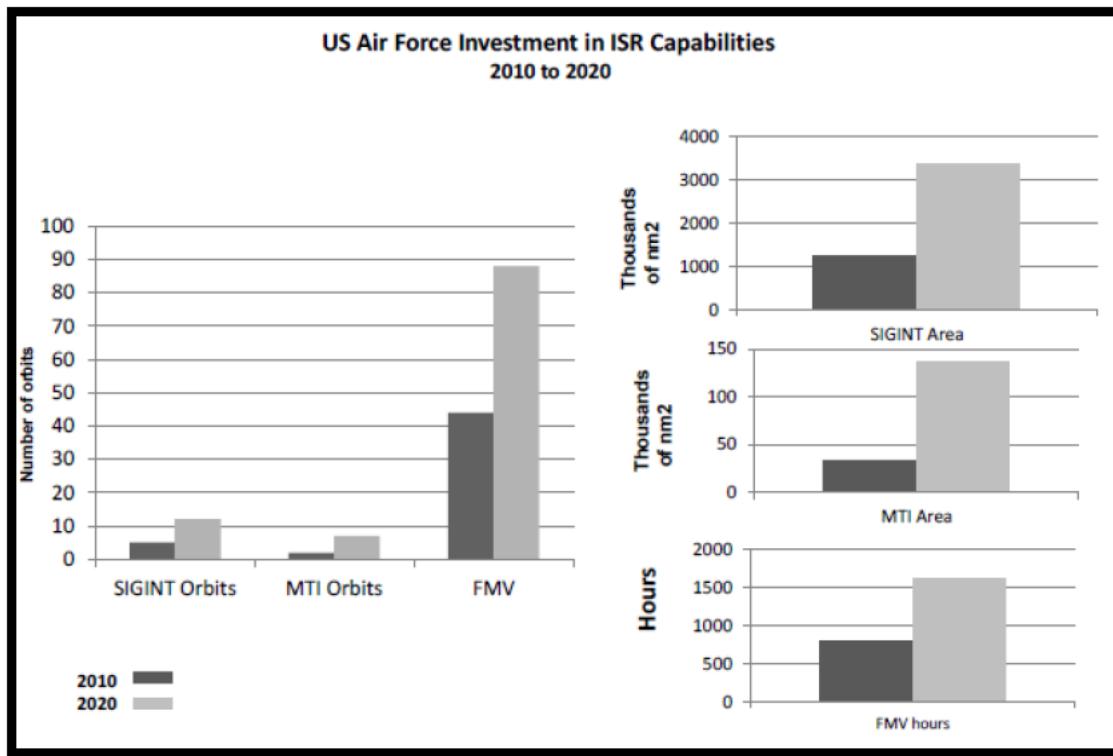


Figure 9 Airborne ISR Capability Approach - 2010 to 2020
 Source: Graph utilized directly from *Laying ISR Forces*-see citation¹⁹

This capabilities approach begins to better address the shortages in ISR with a comparison to ‘what it is you need’ given the requirements of combatant commanders, and various theater planners. Modifications to the Global Hawk, and other RPA’s, do help provide this added level of capability by acquiring more systems as a whole vice attempting to design and procure different platforms.

Regarding the total fleet size in terms of mission design series (MDS), the Air Force does continue to see a larger percentage of ISR platforms as compared to the previous years. This chart (current as of 30 Sept 2012 Air Force Release), provides a third look the aircraft totals as a percentage of the entire Air Force Fleet (active, reserve, and guard) by MDS. Fighter/Attack continues to hold a higher percentage, followed by

¹⁹ Michael W. Isherwood, *Layering ISR Forces*, (Arlington, VA: Mitchell Institute Press, December 2011), <http://www.afa.org/mitchell/reports/0203srf.pdf> (accessed 9 April 2013). pp. 31.

trainers, transports, and tankers. ISR as a percentage of the entire fleet ranks in fifth in the total number of platforms available.

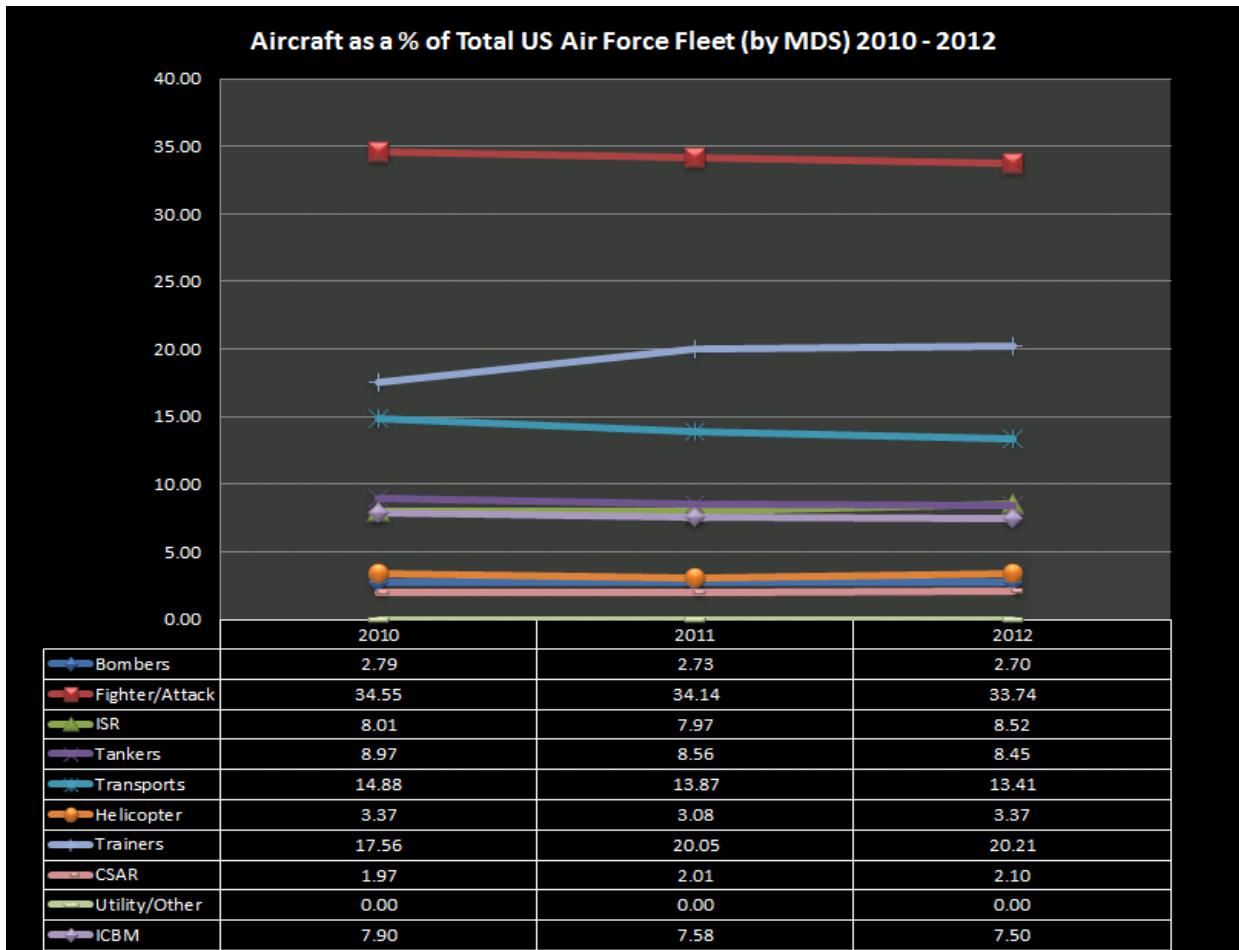


Figure 10 Aircraft Comparison (by MDS) as a Percentage of Total USAF Fleet FY 2010 – 2012

Source: This is the authors' own compilation of raw data from *May 2013 AFA Almanac – pages 45-46*

The small increase in ISR as a percentage of total Air Force platforms currently remains at 8.52%. This increase is largely due to the rapid introduction of SECDEF directed programs such as the MC-12 and MQ-1/9. The MC-12 went from a concept in 2009 to 42 platforms as of Sept 30, 2012, while the MQ-9 went from 18 platforms in 2009 to 104 in 2012.²⁰ According to Colonel Phil Stewart, “the MC-12 was borne to give

²⁰ "2013 USAF Almanac". pp. 45. These numbers were also compared with those of the 2009 Air Force Almanac available at <http://www.airforcemag.com/MagazineArchive/Pages/2009/May%202009/0509cover.aspx>

U.S. Marine Corps and SOF a meaningful and dedicated function of support.”²¹ This deficiency was a result in the gap created with the retirement of purpose built tactical ISR platforms like the RF-4 and OV-10 mentioned earlier, and a reliance on non-traditional ISR only available on an ad-hoc basis.²²

Summary 2010 – Present

The strategic documents of this period, fed by the ongoing conflict in Afghanistan and the hard lessons of a post 9/11 War on Terrorism, have dramatically deviated from the initial guidance placed forward in the first decade of this examination. The differences surround the adherence to the intent of the grand strategic requirements set forth in the NSS, the strategic guidelines carried forth by the NMS, are just now becoming visible within Air Force doctrine and strategic planning. This is not to say that the Air Force has not done its share of providing for national security . . . far from it. This is an examination of the observance of the Government Accounting Office, internal reviews by leaders such as Lt Gen David Deptula, Congressional Research Services, and a host of articles and papers regarding the dogmatic adherence to antiquated priorities.

The 2010 NSS, in part of the defense agenda (see Table 16), directs the continued focus on rebalancing the services to provide capabilities for counterterrorism, COIN, stability operations, anti-access environments, and the ability to assist the civil defense organizations.²³ These characteristics speak to the need for systems and capabilities, as part of a stable of options, that can answer various challenges across the ROMO. This

²¹ Stewart, *Interview with Lt Col Alex Castro*.

²² From the author’s experience, non-traditional ISR (NT-ISR) was a by-product evolution of tactical aircraft mounted with pods meant for the employment of kinetics effects. Although able gather visual information in various spectrums, the lack of ties to an official intelligence processing, exploitation, and dissemination system limited the utility on a larger scale as well as access to the information outside of the squadron that produced the sortie.

²³ Obama, *National Security Strategy-2010*. pp. 14.

continues in the 2011 NSS where Admiral Mullen and the Joint Staff articulate the requirement for forces to “perform across the full spectrum of operations” that includes globally integrated ISR that is modular, adaptable and supportive of the NSS.²⁴ The ISR Task Force answered this challenge with the creation and introduction of the MC-12, while the U-2 and Global Hawk continue to embody and operate under these very requirements. The move towards a battlefield where commanders depend on information and reach-back capability create a commensurate level of response by the Air Force.

As a source of an evaluation, the 2010 QDR examines the DOD as a whole, and concludes that there are several positive strides forward, areas for improvement, and key elements that must continuously monitored as critical nodes in the presentation of combat capability. Under *Operational Risk*, the 2010 QDR identified ISR, vertical lift and logistics, electronic warfare (EW), and cultural skills as all key capability enablers across the DOD.²⁵ The QDR also balances the potential for future conflicts as well as the primacy of the drawn-out conflict that continues to obligate military forces. The operations in Iraq, Somalia, Afghanistan, Libya, and other regional conflicts have proved that the U.S. forces “are prepared for this complex mission, and it is vital that the lessons from today’s conflicts be further institutionalized in military doctrine, training, capability development, and operational planning.”²⁶ The initiatives recommended include expanding manned and unmanned aircraft systems for ISR, SOF assets, and those associated with irregular war. The QDR also directs the enhancement of seven areas that includes more robustness of key ISR capabilities.

²⁴ Mullen, *The National Military Strategy of the United States of America: Redefining America's Military Leadership*. pps. 18-19.

²⁵ Robert M. Gates, Quadrennial Defense Review Report, (Washington, DC: Office of the Secretary of State, February 2012), http://www.defense.gov/qdr/images/QDR_as_of_12Feb10_1000.pdf (accessed 4 April 2013). pps. 90-91.

²⁶ Gates, *Quadrennial Defense Review Report*. pp. viii.

The acquisition of these capabilities is addressed in the 2010 QDR. The institutional risk assumed is driven from the inability to procure new or enhanced options based on the sluggish system currently in place. The following is an acknowledgement of the concern:

Shortcomings in the acquisition process put the DOD at risk of being unable to deliver the capabilities it needs, when it needs them, and at acceptable costs, and these potential failures in turn threaten the successful execution of military operations. The Department's acquisition and support processes have rightly received consistent criticism for delays, cost growth, an overstretched workforce, and other inefficiencies. Given the importance of a healthy acquisition process, we must not embark on programs with artificially low cost estimates, immature designs and technology, fluid requirements, excessive technical authority certification requirements, unstable budgets, and unsustainable procurement profiles.²⁷

The major problems with the DOD's acquisition cycle is currently hostage to four major issues (see above) that restrict the freedom to acquire key platforms, systems, and capabilities within an satisfactory time and cost schedule. These delays and inefficiencies become exacerbated when compounded with the fluidity of the national security environment balanced against the previously rigid views of the Air Force. If the guidance from the grand strategic view of National Security Strategy is clear, and National Military Strategy evolves to support, then the breakdown at the operational strategic level (Air Force Doctrine and guidance) become the point of failure. The creation of the ISR Task Force is but one example of the lack of response from the service when the mission needs clearly changed. Granted air superiority and the risk of losing that is fairly low, and arguably has been for some time, but we have transferred taking little to no risk in one aspect of airpower (by focusing on air superiority) to not

²⁷ Gates, *Quadrennial Defense Review Report*. pp. 93.

supplying the requisite level of attention to other core functions which has ultimately caused mission failures.

CHAPTER 5

Conclusion

The correlation from National Security Strategy, National Military Strategy, Air Force Doctrine, and the resultant provision of ISR as required by grand and operational level strategy is tenuous at best. From the beginning of the time-periods reviewed, the Air Force has reluctantly provided the stated need for increased support in terms of assets with utility against the wide range of threats and missions dictated by national leadership. Since the end of the Cold War, the Air Force has remained focused on providing kinetic capabilities and assets with relatively limited utility outside of war, as its contribution to the joint fleet. Figure 11 graphically illustrates the trend in USAF Airborne ISR in the post-Vietnam era. Although this chart extends beyond the decades examined in this thesis, the observable drawdown of platforms does assist in pointing to the rapid removal of ISR force structure.

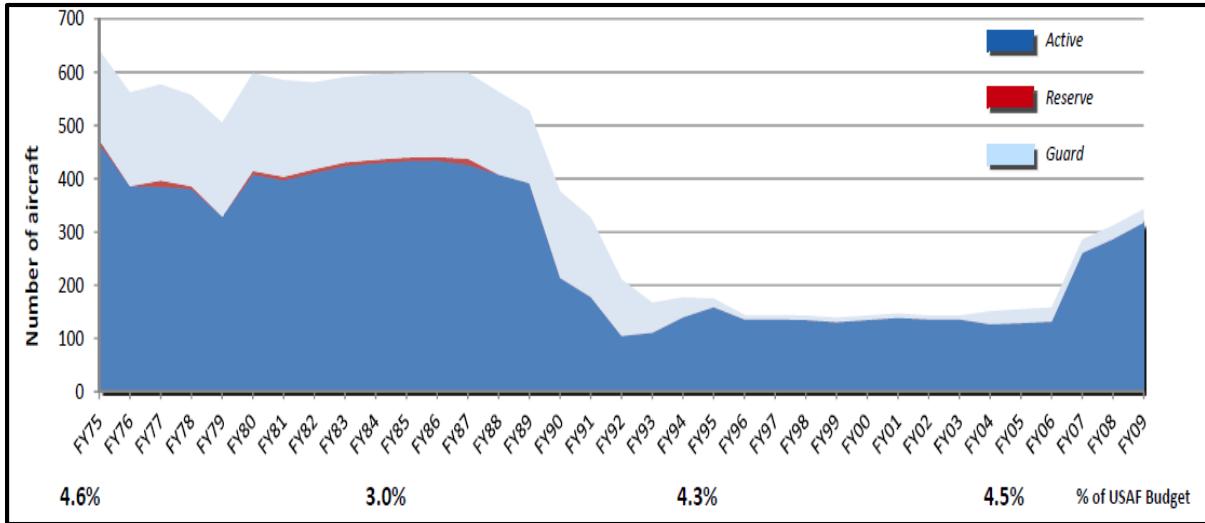


Figure 11 Trends in USAF Airborne ISR FY75 - FY09

(Source: Graphic from Billy Mitchell Institute Brief
http://www.afa.org/Mitchell/presentations/011712_MP8_ISR_slides.pdf page 4

From figure 11, the number of aircraft available fell to under half its size in less than twenty years. This lasted well through operations in Kosovo and Desert Storm. In

fact, even after the events of 9/11 and the subsequent multi-front war in Iraq and Afghanistan, the overall number of aircraft as well as the percent of Air Force budget remained relatively unchanged. Not until FY06 are there indications of a growth in inventory. When asked why the Air Force is lagging in producing the right mix of ISR, Colonel Stewart explained, “the creation of the ISR Task Force should have been the wake up call to the service that no one organization is truly looking at the current and future fight, nor able to provide solutions.”¹ This very observation lies at the center of the many critiques by those external to the service.

This thesis studies two critical components of the overall strategy and acquisition dilemma for the ISR resources operated by the United States Air Force. First, is an analysis of the geopolitical environment, the National Security Strategies, the military priorities set by the National Military Strategy, and the capabilities placed forward by the USAF in terms of ISR during the period of 1990-2012. The research thus provides a look at the key elements that made up the grand strategy of the United States (NSS), the operational strategy of the military (NMS), the doctrinal ideals stated by the Air Force, as well as various assessments contained in the QDR’s. Second, is the acquisition cycle that accounts for the perceived current and future inadequacies as a product of the organizations responsible for long-term ISR strategy. This area is demonstrated via the disaggregate approach to increasing the size of the ISR force during the years leading up to, and immediately after 9/11. When the two critical components are combined, then a picture arises that compares National Security Strategy (NSS), National Military Strategy (NMS), with the Air Force fleet composition that includes ISR as an independent mission design series (MDS).

¹ Stewart, *Interview with Lt Col Alex Castro.*

Aircraft as a % of Total US Air Force Fleet (by MDS) 1999 - 2012 (Active Duty, Guard, Reserve)

With Overlay's of National Security Strategy (NSS) and National Military Strategy (NMS) Priorities and Requirements

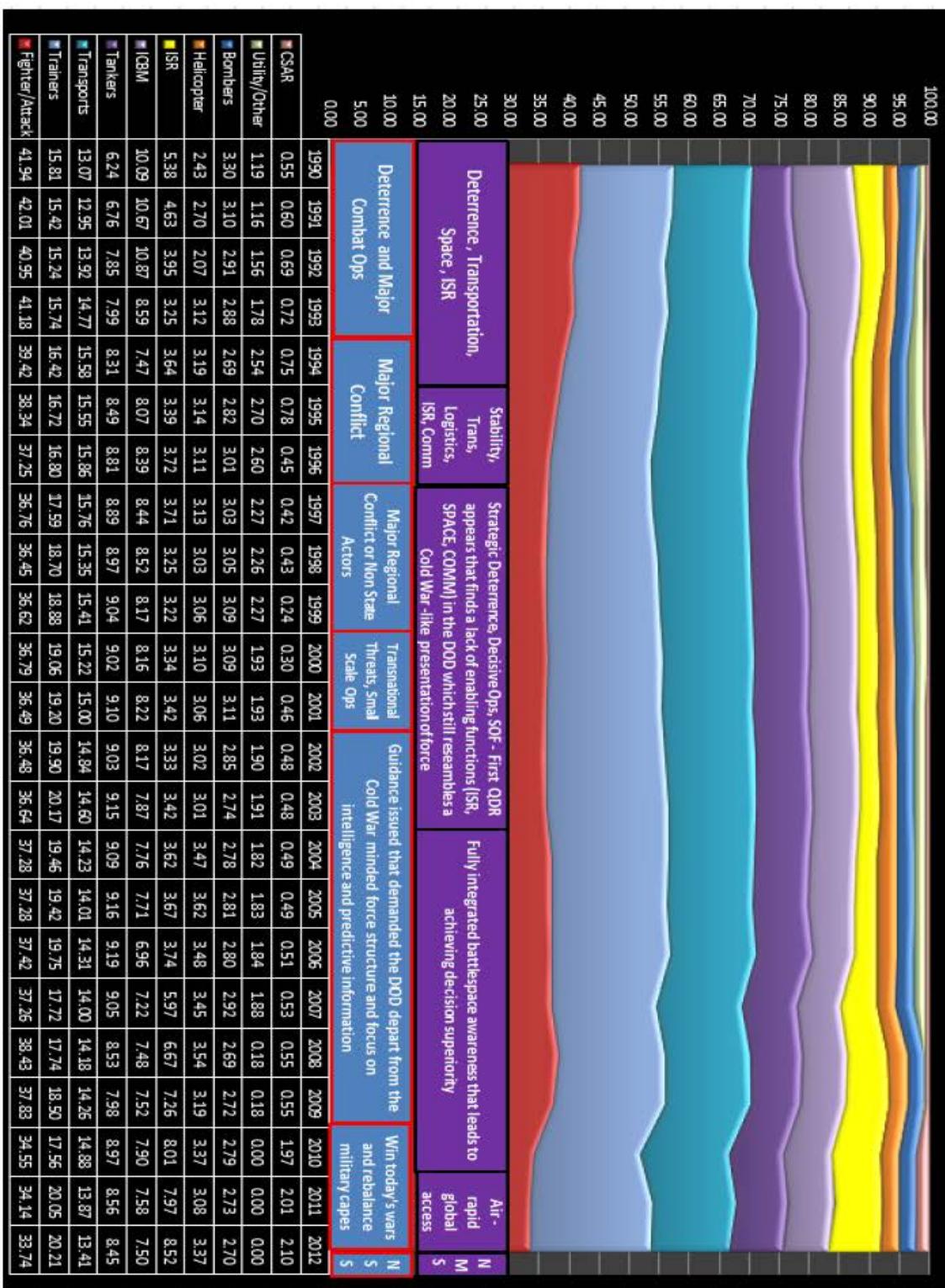


Figure 12 Aircraft as a % of US Air Force Fleet (by MDS) and Priorities of NSS and NMS 1999 - 2012
Source: This is the author's own compilation of information that takes into account previously utilized charts and data

Figure 12 is the combination of the three previous charts that illustrate the force breakdown by MDS. For ISR, despite the changes in National Security Strategy, the articulation of transformation within the National Military Strategy, or external assessments of poor response by the Air Force, the overall force structure remains the same. The average for ISR, except the rapid changes by the SECDEF in late 2006, remained just short of 4% of the fleet. This observation points to a continuous management of platforms to a distinct level along a programmatic line of budgeting vice proactive change to the evolutionary needs of COIN, irregular warfare, or the many non-major conflicts that have tasked the Joint Force. The end result is an ISR force that provides less options by way of platforms, and places a premium on the continued evolution of already deployed systems in order to make up for the demand for intelligence. Thus, in spite of the changes in the security environment, the relative presentation of aircraft (in terms of numbers and percentages) remained comparatively equal from 1990 – 2012.

The major problems with the DOD's acquisition cycle is currently hostage to four major issues (delays, cost growth, an overstretched workforce, and other inefficiencies) that restrict the freedom to acquire key platforms, systems, and capabilities within a satisfactory time and cost schedule.² These delays and inefficiencies become exacerbated when compounded with the fluidity of the national security environment balanced against the previously rigid views of the Air Force. If the guidance from the grand strategic view of National Security Strategy is clear, and National Military Strategy evolves to support, then the breakdown at the operational strategic level (Air Force Doctrine and guidance) become the point of failure. The creation of the ISR Task Force

² Gates, *Quadrennial Defense Review Report*. pp. 93.

is but one example of the lack of response from the service when the mission needs clearly changed. Granted air superiority and the risk of losing that is fairly low, and arguably has been for some time, but we have transferred taking little to no risk in one aspect of airpower (by focusing on air superiority) to not supplying the requisite level of attention to other core functions which has ultimately caused mission failures.

The way forward is a plan that integrates ISR, along with the other major functions of the Air Force, towards a plan that may not look like that which dominated the Cold War era. The application of airpower does not reside simply in the application of air superiority, but demands that service leaders look at what airpower brings to the joint force. The service has included a moniker for certain assets . . . high demand/low density (HD/LD). These assets, as the name implies, remained highly sought after and employed around the world and not just in named operations such as Operation Iraqi Freedom. These assets provide combat airpower, outside of major conflicts, yet are disproportionately represented in the overall force structure as seen in figure 12. The Air Force must change. It is critical to consider the capabilities of potential threats, and look at future adversary's innovations in comparison to our counters to those threats. However, if the Air Force only works on 5th generation aircraft in a certain MDS, then the enemy will simply look for the weakness offered from oversight.

BIBLIOGRAPHY

Academic Papers

Grant, Rebecca. "The All-Seeing Air Force." In, *Air Force Magazine-Online Journal of the Air Force Association* Volume 91, no. No.9 (September 2008).
<http://www.airforcemag.com/MagazineArchive/Pages/2008/September%202008/0908airforce.aspx> (accessed 2 May 2013).

Harrison, Lt Col John M. "Effective and Efficient Use of USAF Airborne ISR and How to Meet Combatant Commander Requirements." Air War College Graduation Requirement, Air University, February 2009.

Holcomb, James F. "Managing Strategic Risk." Chap. 11 In *National Security and Strategy 2nd Edition*, edited by Jr. J. Boone Bartholomees. U.S. Army War College Guide to National Security Policy and Strategy, 143-54. Carlisle Barracks, PA: U.S. Army War College Strategic Studies Institute, June 2006.

J. Boone Bartholomees, Jr. "U.S. Relations With North Korea, 1991-2000." Chap. 26 In *National Security Policy and Strategy Volume-II 5th Edition*, edited by Jr. J. Boone Bartholomees. U.S. Army War College Guide to National Security Issues, 365-80. Carlisle Barracks, PA: U.S. Army War College Strategic Studies Institute, June 2012.

Long, Maj Valarie. "Operational Design and ISR and Zombies." ACSC Graduation Research Project Academic Year '10, Air University Maxwell AFB, AL, April 2010.

Meinhart, Richard M. "National Military Strategies: A Historical Perspective 1990 to 2012." Chap. 6 In *National Security Policy and Strategy Volume II 5th Edition*, edited by Jr. J. Boone Bartholomees. U.S. Army War College Guide to National Security Issues. Carlisle Barracks, PA: U.S. Army War College Strategic Studies Institute, June 2012.

Murphy, Dennis M. "Strategic Communications: Wielding the Information Element of Power." Chap. 12 In *Theory of War and Strategy Volume-I 5th Edition*, edited by Jr. J. Boone Bartholomees. U.S. Army War College Guide to National Security Issues, 159-72. Carlisle Barracks, PA: U.S. Army War College Strategic Studies Institute, June 2012.

Peterson, Steven W. "US Intelligence Support to Decision Making." In *Research Paper available at http://programs.wcfia.harvard.edu/files/fellows/files/peterson.pdf* (accessed 14 January 2013). Cambridge, MA: Weatherhead Center for International Affairs-Harvard University, July 2009.

Ulrich, Marybeth P. "American Values, Interests, and Purpose: Perspectives on the Roots of American Political and Strategic Culture." Chap. 1 In *National Security Policy and Strategy Volume II 5th Edition*, edited by Jr. J. Boone Bartholomees. U.S. Army War College Guide to National Security Issues, 3-12. Carlisle Barracks, PA: U.S. Army War College Strategic Studies Institute, June 2012.

Wormley, Lieutenant Colonel Michael A. *Steady Security: Consistency in National Security Strategy Ends*. Fort Leavenworth, KS: School of Advanced Military Studies, United States Army Command and General Staff College, April 2010. <https://www.hndl.org/?view&did=712668> (accessed on 6 Jan 2013).

Articles

"2013 USAF Almanac." In, *The Air Force Magazine-Online Journal of the Air Force Association* Volume. 96, no. No. 5 (May 2013).
<http://www.airforcemag.com/MagazineArchive/Pages/2013/May%202013/0513cover.aspx> (accessed 15 May 2013).

Anderson, Colonel Dagvin. "A Holistic Approach To Intelligence, Surveillance, and Reconnaissance " In, *Air & Space Power* no. 2 (Winter 2011): 56-63.
http://www.airpower.au.af.mil/airchronicles/api/2011/2011-4/2011_4_04_anderson.pdf (accessed 7 Feb 2013).

Boudreau, Lt Col Robert N. "The New AFM 1-1: Shortfall in Doctrine?". *Airpower Journal*, no. Winter 92 (1992): 37-45.

Deptula, Lt Gen David. *AF ISR Flight Plan- Implementing the Air Force Strategy...to improve ISR capability*. Washington, DC: Office of the Deputy Chief of Staff, ISR, July 2009. PowerPoint. <http://www.docstoc.com/docs/8484097/AF-ISR-Flight-Plan> (accessed 2 February 2013).

Dunlap, Charles J. "Making a Revolutionary Change: Airpower in COIN Today." *Parameters: U.S. Army War College Quarterly* 38, no. 2 (2008): 52-66.

Karabell, Zachary, and Philip Zelikow. "Prelude to War: US Policy Toward Iraq 1988-1990." In, website, 2013, (Jan 1994).
<http://academic.brooklyn.cuny.edu/history/johnson/iraqcse.htm> (online article accessed 31 Mar 2013).

Kelley, Lt Gen Jay W. "Executive Summary for Air Force 2025 CSAF Study." In, *Air Force 2025 a Future Study for the Air Force Chief of Staff available at http://csat.au.af.mil/2025/ Executive Summary*, (August 1996).
http://csat.au.af.mil/2025/e_s.pdf (accessed 2 April 2013).

Moore, Eric S. "Chapter 1: History of the "National Security Strategy of the United States" ." In *The National Strategy Forum Review-Online Winter 2009: Volume 19, Issue 1*, edited by Richard Friedman Chicago, IL: The National Strategy Forum, 2009.
<http://www.nationalstrategy.com/Portals/0/documents/Winter%202009%20NSFR/Chapter%201.pdf> (accessed 2 November 2012).

Romero, Noel. "International Space Hall of Fame." In, *New Mexico Museum of Space History* (1996). <http://www.nmspacemuseum.org/halloffame/detail.php?id=133> (accessed 20 Mar 2013).

Rosenberg, Barry. "DOD Puts ISR In The Vanguard." 1105 Media Inc.-Government Information Group, <http://defensesystems.com/Articles/2009/05/06/Cover-Story-C4ISR-priorities.aspx?p=1> (accessed on 1 March 2013).

Rothman, Harry E. *Forging a New National Military Strategy in a Post Cold War: A Perspective from the Joint Staff*. Carlisle Barracks, PA: U.S. Army War College Strategic Studies Institute, 1992. <http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA249319> (accessed 3 Feb 2013).

Books

Barlow, Jeffrey G. *Revolt of the Admirals*. Washington, DC: Government Reprints Press, 2001.

Biddle, Tami Davis. *Rhetoric and Reality in Air Warfare*. Princeton, NJ: Princeton University Press, 2002.

Henriksen, Dag. *NATO's Gamble: Combining Diplomacy and Airpower in the Kosovo Crisis 1998-1999*. Annapolis, MD: Naval Institute Press, 2007.

Jaffe, Lorna S. "The Development of the Base Force 1989-1992." Washington DC: Joint History Office, Chairman of the Joint Chiefs of Staff, July 1993.

Keeney, L. Douglas. *15 Minutes: General Curtis LeMay and the Countdown to Nuclear Annihilation*. New York, NY: St. Martin's Press, 2011.

Kennett, Lee. *The First Air War: 1914-1918*. New York, NY: Free Press, 1991.

Liddell-Hart, B.H. *Strategy-2nd Revised Edition*. New York, NY: Penguin Publishing, 1991.

Lonsdale, David J. *The Nature of War in the Information Age: Clausewitzian Future Strategy and History*. edited by Colin Gray and Williamson Murray London: Frank Cass, 2004.

Murray, W., R.H. Sinnreich, and J. Lacey. *The Shaping of Grand Strategy: Policy, Diplomacy, and War*. New York NY: Cambridge University Press, 2011.

Randolph, Stephen P. *Powerful and Brutal Weapons: Nixon, Kissinger, and the Easter Offensive*. Cambridge, MA: Harvard University Press, 2007.

Ruehrmund, Col James, and Christopher J. Bowie. *Arsenal of Airpower: USAF Aircraft Inventory*. Arlington, VA: Air Force Association - Mitchell Institute, November 2012.

Schmitt, Eric, and Thom Shanker. *Counterstrike: The Untold Story of America's Secret Campaign Against Al Qaeda*. New York, NY: Times Books, 2011.

Slessor, John C. *Air Power and Armies*. Tuscaloosa, AL: The University of Alabama Press, 2009. Originally published-London: Oxford University Press, 1936.

Snider, Don M. "The National Security Strategy: Documenting Strategic Vision." edited by Marianne P. Cowling. Carlisle Barracks, PA: U.S. Army War College- Strategic Studies Institute, March 15, 1995.

Thompson, Loren B. *U.S. Air Dominance in a Fiscally-Constrained Environment: Defining Paths to the Future-Intelligence, Surveillance, and Reconnaissance*. Arlington, VA: Lexington Institute, March 2013.
<http://www.lexingtoninstitute.org/library/resources/documents/Defense/AirDominance-ISR.pdf> (accessed on 21 Mar 2013).

Briefings/Point Papers/Memos/Messages

Isherwood, Michael W. *Layered ISR- USAF Investment for the Joint Team*. Mitchell Institute for Airpower Studies (Online), January 2012.
http://www.afa.org/Mitchell/presentations/011712_MP8_ISR_slides.pdf (accessed 14 March 2013).

———. *Layering ISR Forces*. Arlington, VA: Mitchell Institute Press, December 2011.
<http://www.afa.org/mitchell/reports/0203srf.pdf> (accessed 9 April 2013).

Loxterkamp, Mr. Ed. *Advanced Systems and Concepts Joint Capability Technology Demonstrations (A presentation to SECDEF ISR Task Force)*. Washington, DC: Department of Defense, June 2009. PowerPoint. <http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA511680> (accessed 3 April 2013).

Government Documents/Reports

Best, Richard A., and Christopher C. Bolkcom. "Congressional Research Report-Airborne Intelligence, Surveillance & Reconnaissance (ISR): The U-2 Aircraft

and Global Hawk UAV Programs." In *REPORT CODE-RL30727*. Washington DC: Congressional Research Service, the Library of Congress, 2000.

Bush, President George H.W. *National Security Strategy of the United States-1990*. Washington, DC, March 1990. <http://nssarchive.us/NSSR/1990.pdf> (accessed 9 Dec 2012).

———. *National Security Strategy of The United States-1991*. Washington DC: The White House, August 1991. <http://nssarchive.us/NSSR/1991.pdf> (accessed 9 Dec 2012).

———. *National Security Strategy of the United States-1993*. Washington, DC: The White House, January 1993. <http://nssarchive.us/NSSR/1993.pdf> (accessed 9 Dec 2012).

Bush, President George W. *The National Security Strategy of The United States-2002*. Washington, DC The White House, September 2002. <http://nssarchive.us/NSSR/2002.pdf> (accessed 12 Dec 2012).

———. *The National Security Strategy of the United States of America-2006*. Washington, DC: The White House, March 2006. <http://nssarchive.us/NSSR/2006.pdf> (accessed 12 Dec 2013).

Chizek, Judy G. "Military Transformation: Intelligence, Surveillance and Reconnaissance." In *Report for Congress-RL31425*. Washington DC: Foreign Affairs, Defense, and Trade Division-Library of Congress, January 2003.

Clinton, President William J. *A National Security and Strategy of Engagement and Enlargement-1995*. Washington, DC: The White House, February 1995. <http://nssarchive.us/NSSR/1995.pdf> (accessed 9 Dec 2012).

———. *A National Security Strategy For A Global Age-2001*. Washington, DC: The White House, December 2000. <http://nssarchive.us/NSSR/2001.pdf> (accessed 9 Dec 2012).

———. *A National Security Strategy For A New Century*. Washington, DC: The White House, December 1999. <http://nssarchive.us/NSSR/2000.pdf> (accessed 9 Dec 2013).

———. *A National Security Strategy For A New Century-1997*. Washington, DC: The White House, May 1997. <http://nssarchive.us/NSSR/1997.pdf> (accessed on 12 Dec 2012).

———. *A National Security Strategy For A New Century-1998*. Washington, DC: The White House, October 1998. <http://nssarchive.us/NSSR/1998.pdf> (accessed 13 Dec 2012).

———. *A National Security Strategy of Engagement and Enlargement-1994*. Washington, DC: The White House, July 1994. <http://nssarchive.us/NSSR/1994.pdf> (accessed 9 Dec 2012).

———. *A National Security Strategy of Engagement and Enlargement-1996*. Washington DC: The White House, February 1996. <http://nssarchive.us/NSSR/1996.PDF> (accessed 13 Dec 2012).

Cohen, Secretary of Defense William S. *Report of the Quadrennial Defense Review-1997*. Washington, DC: Department of Defense, May 1997. <http://www.isn.ethz.ch/isn/Digital-Library/Publications/Detail/?ots783=0c54e3b3-1e9c-be1e-2c24-a6a8c7060233&lng=en&id=32542> (accessed 20 March 2013).

Department of Defense, (DOD). *National Defense Strategy of The United States of America - 2005*. Washington D.C., March 2005.
http://history.defense.gov/resources/2005_NDS.pdf.

_____. "US Department of Defense - QDR 101: What You Should Know." In *electronic format* <http://www.isn.ethz.ch/isn/Digital-Library/Publications/Detail/?ots783=0c54e3b3-1e9c-be1e-2c24-a6a8c7060233&lng=en&id=32542> edited by (DOD) Department of Defense. Washington, DC: U.S. Department of Defense Office of Public Affairs, January 2010.

DOD, Department of Defense. "PBD-720 Air Force Transformation Flight Plan." edited by Under Secretary of Defense (Comptroller). Washington, DC: Department of Defense, December 2005.

GAO, Government Accountability Office. *Intelligence, Surveillance, and Reconnaissance: Actions Are Needed to Increase Integration and Efficiencies of DOD's ISR Enterprise GAO-11-465*. Washington D.C.: GAO, June 2011.
<http://www.gao.gov/new.items/d11465.pdf>.

_____. *Intelligence, Surveillance, and Reconnaissance: DOD Can Better Assess and Integrate ISR Capabilities and Oversee Development of Future ISR Requirements, GAO-08-374*. Washington D.C., March 2008.
<http://www.gao.gov/new.items/d08374.pdf>.

GAO, Government Accounting Office. *ISR - Preliminary Observations on DOD's Approach to Managing Requirements for New Systems, Existing Assets, and Systems Development GAO-070596T*. Washington D.C. : GAO, April 2007.
<http://www.gao.gov/assets/120/115795.pdf>.

Gates, Robert M. *Quadrennial Defense Review Report*. Washington, DC: Office of the Secretary of State, February 2012.
http://www.defense.gov/qdr/images/QDR_as_of_12Feb10_1000.pdf (accessed 4 April 2013).

HPSCI, House Permanent Select Committee on Intelligence. "Performance Audit of Department of Defense Intelligence, Surveillance, and Reconnaissance." United States Government,
<http://intelligence.house.gov/sites/intelligence.house.gov/files/documents/ISRPerformanceAudit%20Final.pdf> (accessed on 15 December 2012).

Obama, President Barack H. *National Security Strategy-2010*. Washington, DC: The White House, May 2010. <http://nssarchive.us/NSSR/2010.pdf> (access 13 Dec 2012).

Personal Communications – Interviews

Lee, Colonel Douglas J. *Interview with Lt Col Alex Castro*. Personal Interview. Beale AFB, CA January 23, 2013.

Stewart, Colonel Phillip A. *Interview with Lt Col Alex Castro*. Personal Interview. Beale AFB, CA January 25, 2013.

Manuals, Instructions, Directives, and Other Publications

(DSB), Defense Science Board. *Counterinsurgency (COIN) Intelligence, Surveillance, and Reconnaissance (ISR) Operations*. Washington, DC: Office of the Undersecretary of Defense for Acquisition, Technology, and Logistics, February

2011. <http://journalistsresource.org/studies/government/congress/iraq-afghanistan-counterinsurgency-intelligence#> (accessed on 12 March 2013).

Mullen, Admiral Michael. *The National Military Strategy of the United States of America: Redefining America's Military Leadership*. Washington, DC: Office of the Chairman of the Joint Chiefs of Staff, February 2011.
http://www.jcs.mil/content/files/2011-02/020811084800_2011_NMS_-08_FEB_2011.pdf (accessed 16 December 2012).

Myers, General Richard B. *The National Military Strategy of the United States of America: A Strategy for Today; A Vision for Tomorrow*. Washington, DC: Office of the Chairman of the Joint Chiefs of Staff, 2004.
<http://www.au.af.mil/au/awc/awcgate/nms/nms2004.pdf> (accessed 13 Dec 2012).

Powell, General Colin L. *The National Military Strategy of the United States - 1992*. Washington, DC: Office of the Chairman of the Joint Chiefs of Staff, January 1992. <http://history.defense.gov/resources/nms1992.pdf> (accessed 12 Dec 2012).

Shalikashvili, General John M. "Joint Vision 2010." edited by Director of Strategic Plans and Policy J-5. Washington, DC: US Government Printing Office, 1996.

—. *The National Military Strategy of the United States of America-1995: A Strategy of Flexible and Selective Engagement*. Washington, DC: Office of the Chairman of the Joint Chiefs of Staff, February 1995.
<http://history.defense.gov/resources/nms1995.pdf> (accessed 13 Dec 2012).

—. *The National Military Strategy of the United States of America-1997: Shape, Respond, Prepare Now-A Military Strategy for a New Era*. Washington, DC: Office of the Chairman of the Joint Chiefs of Staff, September 1997.
<http://history.defense.gov/resources/nms1997.pdf> (accessed 13 Dec 2012).

Shelton, General Henry H. *Joint Publication 3-0 Doctrine for Joint Operations- 2001*. Washington, DC: Office of the Chairman of the Joint Chiefs of Staff, September 2001.
http://www.fas.fed.us/fire/doctrine/genesis_and_evolution/source_materials/dod_joint_ops_doctrine.pdf (accessed 8 November 2012).

—. "Joint Vision 2020." edited by Director of Strategic Plans and Policy J-5. Washington, DC: The Office of the Chairman of the Joint Chiefs of Staff, May 2000.

USAF. *Air Force Basic Doctrine, Organization, and Command: Air Force Doctrine Document-1 - 2011*. edited by LeMay Center/DDS, certified by LeMay Center /CC Maj Gen Thomas K. Anderson and approved by Chief of Staff General Norton A. Schwartz Maxwell AFB, AL: Headquarters Air Force Doctrine Center, November 2011.

—. *Air Force Basic Doctrine: Air Force Doctrine Document-1 - 1997*. AFDD-1. edited by HQ AFDC/DR Lt Col Donald R. Poynor, certified by HQ AFDC/CC Maj Gen Ronald E. Keys and approved by Chief of Staff General Michael E. Ryan Maxwell AFB, AL: Headquarters Air Force Doctrine Center, September 1997.

—. *Air Force Basic Doctrine: Air Force Doctrine Document-1 - 2003*. AFDD-1. edited by HQ AFDC/DR Mr. D Robert Poynor, certified by AFDC/CC Maj Gen David F. MacGhee Jr. and approved by Chief of Staff General John P. Jumper Maxwell AFB, AL: Headquarters Air Force Doctrine Center, November 2003.

- _____. *Air Force Manual 1-1 Basic Aerospace Doctrine of the United States Air Force Vol-I* - 1992. edited by John E. Jordan, Colonel Dennis M. Drew and approved by Maj Gen Howell M. Estes III. Vol. I, Washington, DC: Department of the Air Force, Headquarters US Air Force, March 1992.
- _____. *Air Force Manual 1-1 Basic Aerospace Doctrine of the United States Air Force Vol-II* - 1992. edited by John E. Jordan, Colonel Dennis M. Drew and approved by Maj Gen Howell M. Estes III. Vol. II, Washington, DC: Department of the Air Force, Headquarters US Air Force, March 1992.
- _____. "Air Force Policy Directive 14-1 ISR Planning, Resources, and Operations-2004." edited by HQ USAF/XOIIR. Washington, DC: Department of the Air Force, April 2004.
- _____. *Global Integrated Intelligence, Surveillance, & Reconnaissance Operations: Air Force Doctrine Document 2-0-2012*. edited by LeMay Center/DDS, certified by LeMay Center/CC Maj Gen Thomas K. Anderson and approved by Chief of Staff General Norton A. Schwartz Maxwell AFB, AL: LeMay Doctrine Center Publishing, January 2012.
- _____. *Intelligence, Surveillance, and Reconnaissance Operations: Air Force Doctrine Document 2-5.2-1999*. edited by HQ AFDC/DR Capt Frederick L. Baier, certified by AFDC/DR Col Thomas A. Bowermeister and approved by AFDC/CC Major General Timothy A. Kinnan Maxwell AFB, AL: Headquarters Air Force Doctrine Center, April 1999.